

Chapter-1

Introduction

“A design of a bibliographic database of Ph.D. thesis awarded by Sant Gadge Baba Amravati University Amravati Using WINISIS: Since 1983-2011” Which are product of research activity form an important Source of information apart from giving the experimental evidence. It also records a thorough review of works that have already been done in a particular field to show that the proposed work is not done elsewhere.

The scientific information comes through number of publications such as periodicals, journals, thesis etc. Among various sources thesis is one of the valuable source of information. Importance of thesis literature as a Source of nascent information which covers the following facts.

- 1) Thesis contains new researchable information and ideas.
- 2) Thesis may be the result of purely academic pursuit.
- 3) Thesis can provide true information to researcher to enable them to avoid the possibility of duplication of research work which is already done.

Information contained in the thesis is usually not published therefore it is a unpublished primary source which provides new ideas, concept formula and new research results. Thesis may cover the depth information on micro thoughts, comparison of subjects, depth study of subjects or new developments in subjects etc.

“Thesis or dissertations are by their very nature meant to report some original work in specific field. One important characteristic of such research report is that they may be the result of purely academic pursuit. The subject of thesis may

not have any commercial application yet it may be worth pursuing an idea, a process, a technique etc. Thesis is nothing but the academic research it provides such opportunities among all the Primary sources.

CONCEPT OF RESEARCH

Research is as old as the academic consciousness of human mind. Man has all along tried to look back at his history for better understanding of the evolutionary process leading to the present stage of man kind. He has also endeavored to re-examine and wherever possible to re-interpret the seeds of future are shown in the present itself. Man's urge to understand the present has obviously induced him to look into his past more carefully things he has already gone through. Present has its roots in the past and the present his interpretations more scientifically in order to give purposeful direction to his intellectual efforts in pursuit of diverse ends to which the human activities are devoted. This urge of human brain to re-examine and re-understand things may rightly be called research at least, to being with the concept of research is thus closely linked with human endeavor for better understanding of this evolution, environment and growth through diverse stages of human history.

Research therefore, has been an integral part of academic pursuits in the past. It has served two-fold purpose of intellectual sharpening and evolving new theories to explain diverse phenomenon through which mankind has survived to its present form. It may not only be for academic interest but more for human enlightenment that one should study history to understand the dimension of development of mankind.

Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. In fact research is an art of scientific investigation.

The advanced Learner's dictionary of current English lays down the meaning of research as "a careful investigation or inquiry especially through search for new facts in any branch of knowledge".

Redmen and Mory define research as a "systematized effort to gain new knowledge". Some people consider research as a movement, a movement from the known to the unknown. It is actually a voyage of discovery. We all possess the vital instinct of inquisitiveness for, when the unknown confronts us, we wonder and our inquisitiveness makes us probe and attain full and fuller understanding of the unknown. This inquisitiveness is the mother of all knowledge and the method, which man employs for obtaining the knowledge of whatever the unknown can be termed as research.

Research is an academic activity and as such the term should be used in a technical sense. According to Clifford Woody research comprises defining and redefining problems, formulating hypothesis or suggested solution; collecting, organizing, and evaluating data; making deductions and reaching conclusions; and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis.

D. Stesinger and M. Stephenson in the Encyclopedia of Social Sciences define research "the manipulation of thing, concepts or symbols for the purpose of generalizing to extend, correct or verify knowledge".

Research should never be treated as a piece of compilation work. By reading a number of books and compiling their material in yet another book is no research. Research is always expected to be something original or a piece of work that advances human knowledge. This may be done in several ways such as re-interpretation of an existing theory, investigation of an unexplored area or development of a new theory etc. The main thing, therefore, is that a researcher should select a field of operation that offers possibility of inquisition or quest. Researcher must be clear in his mind as to what he is looking for.

The domain of research problems must be well-specified and accurately defined. Those research investigations whose operational domain is not specific always remain inconclusive. It is always useful to select a smaller area of investigation and study it more intensively. Micro-level analysis is more precisely researchable than the macro – level studies.

Research must be based on facts, observable data forms a sound basis of research-inductive investigations lend greater support to research findings. For analyzing facts a scientific methodology of researcher on the right track and saves his time and effort by not going astray.

The modern concept of research is, therefore broad-based and provides for a meaningful investigation into any field of academics.

According to John Best, “Research is a more systematic activity directed towards discovery and the development of an organized body of knowledge.” A summary of some of the characteristics of research may clarify its methodology.

1. Research is directed towards the solution of a problem. It may attempt to answer a question or to determine the relation between two or more variables;
2. Research emphasizes the development of generalization, principles of theories that will be helpful in predicting future occurrences.
3. Research is base upon observable experience or empirical evidence:
4. Research demand accurate observations and description;
5. Research involves gathering new data from primary or first hand sources or using existing data for a new purpose;
6. Research requires expertise. The researcher knows what is already known about the problem and how others have investigated it;
7. Research strives to be objectives and logical applying every possible test to valid at the procedures employees, the data collected and the conclusions reached;
8. Research is characterized by patient and unhurried activity;
9. Research is carefully recorded and reported
10. Research sometimes requires courage

Side View On DATABASE

In recent years database technology has become one of the most rapidly growing areas of computer and information science. The database is basically a computer based record keeping system those records and maintains the user information. According to James Martin, “Database is a collection of interrelated data stored together without harmful or unnecessary redundancy to serve multiple applications.

“The term Database was defined by Williams (1974) has an organized set of machine readable records containing bibliographic and document related data”

A database is an organized form of records (a set, a character make a field, a set of fields make a record) collected or created to satisfy the information requirements of a given user community. Such organized collections can be about many things e.g. database consists of discrete data elements each comprising of a specific characteristic of the entity being described. For example, a bibliographical data-base will contain information relating to books, periodicals, articles etc.

For the purpose of information storage and retrieval, a database means a bibliographic database in machine readable form usually available in tapes. The data contains bibliographical details (citations / abstract or even full text of documents)

In other words, an organization of data files having information and reference material on a particular subject, or subjects. It is typically structured so that headings and keywords can be referenced easily, which permits efficient and simple access to – and retrieval of – records. The individual files are further structured in to hierarchy of records and fields.

A database is a mechanical formally defined and centrally controlled collection of data used in an organization.

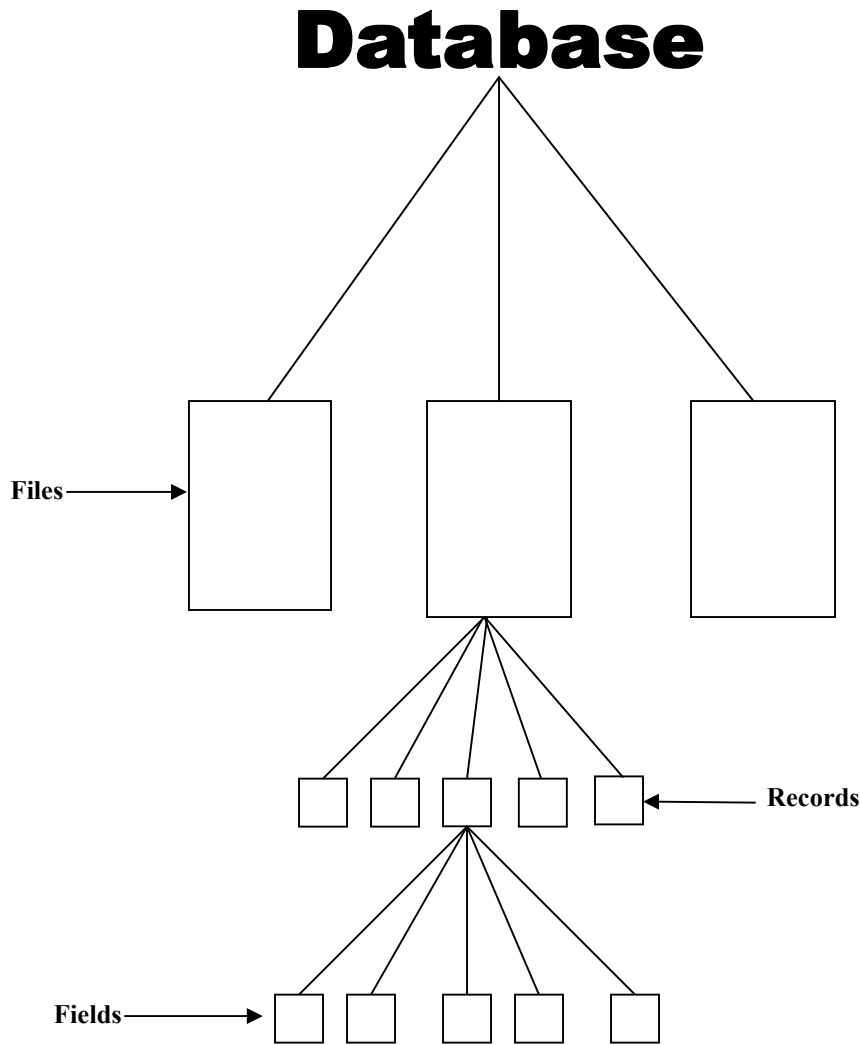


Figure No. 1 Diagram of Database

Also we can say that, data means facts, figures and symbols especially as stored in computers. The term is often used to mean raw, unprocessed facts as distinct from information, to which a meaning or interpretation has been applied and database means structured collection of data. The database makes data available to the various programs that need it, without the need for those programs to be aware of how the data are stored. There are three main types (or 'Models'): hierarchical, network and relational is the most widely used. A free text database is one that holds the unstructured text of articles or books in a form that permits rapid searching.

Objective of Database Technology:-

There are number of objectives of Database Technology. Some of them are as follows:

1. To make an integrated collection of data available to a wide variety of users;
2. To provide for quality and integrity of the database;
3. To ensure retention of privacy through security measures within the system;
4. To allow centralized control at database, which is necessary for efficient data administration.
5. To handled different users views of the same stored data.

Need for Creation of Database:

The database system has created a need for design procedures to cope up with the problems raised by the greater database complexity and by the database integration with user functions. The need for creation of database is:

- To reduce the data redundancy.
- To provide stable data structures that can be readily changed with changing user requirements.
- To allow user to make adhere requests for data.
- To maintain complex relationships between data elements.
- To support a large variety of decision needs.

Sant Gadge Baba Amravati University, Amravati at a Glance

The western region of Vidharbha is known for a great cultural heritage and traditions since the dawn of civilization. The region has contributed significantly in the cultural and social development of India. The famous epic Maharashtra also

quotes the names “Vidharbha” and “Indrapuri” i.e., the present day “Amravati.” The western Vidharbha region is also known for its agrarian wealth and rich cotton producing soil. Amravati is one of the leading centers for production of quality cotton and oranges. This land also has a great tradition of educational and cultural excellence.

Government of Maharashtra enacted Amravati University Act, and established Amravati University on 1st May 1983. In consequence upon the decision of the Maharashtra Legislative Assembly, information of all the concerned that the Governor of Maharashtra is pleased to promulgate Maharashtra Act No.XXI of 2005 amending the Maharashtra Universities Act,1994 which is published in Maharashtra Government Gazette Part- VIII on the 4th May,2005, as under:-

“(2) In the Schedule to the Maharashtra Universities Act,1994, in part I,-

(a)***

(b) In entry 7, in column (2), for the words “the Amravati University,” the words “The Sant Gadge Baba Amravati University” Shall be substituted.

On the commencement of the Act No. XXI of 2005, any reference to “the Amravati University” in any other enactment, or rules, regulations, bye-laws, notifications or orders issued under any enactment or in any instrument, document or proceedings under its original name shall, unless the context otherwise requires, be deemed and constructed to be the reference to “ Sant Gadge Baba Amravati University”.

This University geographically covers the western Vidharbha belt i.e., five districts- Amravati, Akola, Yavatmal, Buldhana and Washim. The University, in its small span of 29 years, has contributed in many ways for economic, social, and cultural upliftment of society by offering quality education. The motto of this University is “Education for Salvation of Soul”.

Amravati University is one of the leading educational centers for providing higher education, which performs multifarious activities in the sphere of teaching, research and extension. The University is recognized by UGC under section 12(B) of UGC Act.

The University offers various certificate, diploma and degrees, post-graduates and research programs in 10 faculties. At present there are 21 University Teaching Departments within its campus. In a small span of 33 years, this University has made a commendable progress in terms of number of students enrolled, number of examinations conducted, and number of affiliated colleges.

Doctoral research programs are offered in all faculties. Scholars are working for their Ph.D degree in different faculties. Similarly the University encourages the teachers and scholars to undertake various major and minor research projects in the issues of social and regional relevance, and basic and applied sciences. The University has various research projects in different faculties. The University also offers various educational programs in different disciplines through University teaching departments and affiliated colleges.

Library at a Glance

The library is an indispensable part of an educational system. The richer and more devoted the library is the more it uplifts the order of an education. The University library not only provides information needed by students, professor, and research scholars but it has become a blooming hub which attends to the wants of readers and the students of this division and the state.

Resorting to the information and technology has changed the form and the working of library and accordingly this library endeavors to see that the services and facilities are being provided to the readers and the students.

Today the concept of the opulence of the library has been changed. As results, merely a stately building and abundance of books are no longer supposed to be the symbols of rich library. On the other hand, the library having more and more facilities to access the information is considered to be a rich library. This is why the University Library lays a stress on providing such types of advantages and facilities. All the professors and research scholars in postgraduate section are provided with the free of charge Internet services by the University Library. The library having an excellent management is regarded as an ideal library. Taking in to consideration the fact, the consistent efforts are being made to make the Sant Gadgebaba Amravati University Library more and more reader friendly. The management committee and board of library, having an eye to these facts, have always tried to bring about the comprehensive development of library. Likewise honorable vice-chancellor has tried to expedite the work of development and the stress has been laid on the computerization & digitization of library. As a result, the database of collection of all the books has been accomplished.

Amravati University Library building is almost in geographical centre of the campus. The University Library is planned on functional basis in order to render effective and efficient services to users. It is one of the biggest and best structures in the country which satisfies future needs for at least fifty to hundred years to come and provide accommodation to house for five lakh books and five hundred users at a time in a reading room and other reading areas of the building. Amravati University Library has occupied total of 8094 Sq.m. Area. Total collection of the library is 104844, which includes 78388 books, 1200 thesis, 9010 back volumes, 15600 dissertations, 534 national and 112 international journals subscribed.

At present, University Library is rendering the various services to the faculty members, research scholars, and students of the teaching departments of the University. It also renders services to the other employees of the University. The academic staff and students of the teaching departments of the University are entitled to borrow books from the central library. Central library is a major resource of knowledge in the University for Academic Excellence and development of research.

Aims and objectives of the Study:

The present research primarily aims to develop database of Ph.D. thesis awarded by Sant Gadge Baba Amravati University, Amravati during the period 1983 to 2011.

Specifically the objectives are:

- 1) To make an integrated collection of data available to a wide variety of users;
- 2) To allow centralized control at database, which is necessary for efficient data administration.
- 3) To handled different users views of the same stored data.
- 4) To provide exact figure of thesis which are already submitted to Sant Gadge Baba Amravati University, Amravati. in various faculties.
- 5) To Provide all bibliographical details about the Ph.D. thesis submitted to Sant Gadge Baba Amravati University, Amravati.
- 6) To avoid the duplication of research work, which has already done.

Scope of the study:

The scope of the present study has confined to Sant Gadge Baba Amravati University, Amravati. The study is restricted to all those faculties of University in which Ph.D. thesis is awarded and the period is chosen from 1983 to 2011. The approximate figure of Ph.D. thesis is over 1000 which cover 10 faculties which are running as indispensable part of educational part of educational system.

Methodology:

Present study is concerned to Library and Information Science. This subject covered under Social Science research. The author has used the research methodology, which is applicable for research in Social Sciences

The main objective of the present study was to develop the database of Ph.D. thesis awarded by Sant Gadge Baba Amravati University, Amravati. With the help of computer by using library software apart from various library software researcher has selected WINISIS : CDS/ISIS windows version because it has distinctive features of windows program. The author has conducted this study by experimental method because mentioned database designed by using WINISIS

Hypothesis:

The present study puts forth the following hypothesis that,

1. The proposed database will be helpful to know about the research which has to be done already.
2. The database will be helpful to provide all bibliographical details about the Ph.D. thesis submitted to Sant Gadge Baba Amravati University, Amravati.

Statement of Problem:

Earlier the research has been conducted on the dissertations submitted for the Master Degree in the field of Library and Information Science in Sant Gadge Baba Amravati University, Amravati. But it does not include the study of thesis submitted for the degree of Ph.D. in all faculties to Sant Gadge Baba Amravati University, Amravati.

As a result, the relevant research scholar has opted in for problem namely “A design of a bibliographic database of Ph.D. thesis awarded by Sant Gadge Baba Amravati University, Amravati. Using WINISIS: Since 1983-2011.

The present research work may contribute as follows.

- 1) It will provide the information about as to in which areas of the every faculty the research thesis have been presented. Beside it will give the idea about the research thesis related to the field.
- 2) The above information will serve an aid to research scholars while conducting the research in various areas.
- 3) This project will avert the recurrence of research thesis in various fields.
- 4) It will prove helpful to future research scholars to opt in for their subject.

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Chapter-2

Review of Literature

This chapter presents an overview of the result of earlier studies conducted by eminent library professionals.

As per the Research Methodology the researcher is expected to know the previous work done in the field and it is also expected that the work already done by various authors should not be repeated by researcher. Keeping in view the author conducted literature search by scanning the available resources, books, dissertations, conference and seminar paper, articles appeared in different journals etc.

ARD Prasad in his article “*Application of OCR in Building Bibliographic Databases*” discussed the bibliographic database tend to be very verbose and pose a problem to libraries due to the huge amount of data entry involved. In these institutions, the two technologies that offer solutions are retro-conversion and optical character recognition (OCR). The application of building an intelligent system for automatic identification of bibliographic elements like title, author, publisher, etc. is discussed here. This paper also discusses the heuristics in identifying the elements and resolving conflicts that arise in situations where more than one bibliographic elements satisfy the criteria specified for identifying the various elements.

Dixit, R.P. inner article of author *“Online Databases and Databanks of US National Library of Medicine”* explained the establishment of the US National Library of Medicine (NLM) and its collection, both print and non-print materials. Describes the publication of Index Medicus. Medical Subject Heading (MeSH) responsible for bringing the world-wide health sciences literature information under bibliographical control as well as indexing operations and its online system. Elaborates various online databases and databanks accessible through two computer subsystems of MEDALARS, viz. ELHILL and TOXNET. Discusses internet-accessible resources and its capabilities, international MEDLINE agreements and collaboration with WHO.

Gupta, V.K. inner article of author *“Copyright Issues Relating to Database Use”* explained databases are being created for dissemination of information in various sectors such as industry, tourism and hotel, culture development, planning, agriculture, health, environment, science and technology, geography, population etc. This article focuses on issues related to copyright protection of these databases.

Iyengar, Vasundhara. S. in her article *“A Database in Retrospect: Creation of the Union List of USIS Libraries in India”* explore how we can import bibliographic data, and also eliminate efforts of data input and verification and to explore how best we can utilize the database for automating more library functions.

Jain, S.P. and Sunil Gorla, G.B. in their article *“Design and Management of ‘Indian Agricultural Index’ Bibliographical Database by using WINISIS”* discuss the techniques for designing and managing the bibliographical database by using WINISIS software package. This article deals thoroughly all the steps from

creation to printing of records for ‘Indian Agricultural Index’ and the same steps can be utilized for any other indexing service. These steps are required for the creation of its main entry section, author, and keyword indexes. The article will be useful for a beginner having no knowledge of computer programming for designing a database to fulfill the local needs of his/her users.

Mahesh. G. and Ghosh, S.B. are described in the article *“Availability and Use of Indigenous databases by S &T Libraries: A Case Study”* the demand for indigenous databases in the various branches of science and technology is on the rise owing to the difficulties in accessibility of international databases which has resulted in the growth of Indian S&T databases.

The present case study analyses the Databases of Indian Databases (INDAB) compiled by National Information System for Science and Technology (NISSAT) and surveys nine libraries attached to leading S & T institutions in the New Delhi to find out the usage of indigenous databases reported in INDAB. It is found that none of the libraries surveyed is using any of the databases reported in INDAB.

Mishra, Kamini. S. in her article *“Bibliographic Databases and Exchange Formats”* deals the role of computer in the development of bibliographic databases. For generation and exchange of bibliographic data at different levels- international, national, regional and local- exchange formats are needed. This paper discusses about the formats available at national and international level for adoption by national, international agencies and , individuals/organizations as per their requirements.

Mittal, Rekha. In her article *“Creation of Subject Index to NUCSSI Database with CDS/ISIS Package”* describes the use CDS/ISIS package (version

1.0) for the creation of subject index to national Union Catalogue of Scientific Serial in India (NUCSSI) database and focuses on designing of subject code, setting up the database and basic features of CDS/ISIS.

Pichappan, P. in his article *“Chemical Information and its Databases”* explains chemical information, categories chemical databases; bibliographical databases; factual databases; commercial databases; and industrial databases and full text databases along with provider’s name, contents, period covered and name of the system’s on which these are available. Also, indicates the growth pattern of these databases.

Shah, P.C. and Sitwala, K.C. in their article *“Making a Database Product Self-Sustain: The Experience of TEXINCON”*. TEXINCON is a bibliographic database, containing self explanatory summaries of articles, developments, books, standards, etc. in the field of textile and allied subjects, being produced by Ahmedabad Textile Industry’s Research Association. The contents, management, publicity, marketing, and sales efforts being done for TEXINCON have been covered in this article.

Sreedevi Ravindran in her article *“Bibliographic Databases: Software Issues”* discussed the success of any information centre lies not only on its own resources but also in identifying and enlisting the various sources of information and developing the requisite tools and systems for tapping those resources. The minimum requirement for ensuring such sharing of information is a common format for the maintenance of databases and the requisite technology inputs including software packages. This paper presents an overview of various software available for library automation and management of bibliographic databases and the various considerations in selecting a software.

Sreelatha, G. and Simha, Aparna in their article ***“A USER-INTERFACE FOR INFORMATION RETRIEVAL IN CDS/ISIS DATABASES”*** the capabilities of Mini-Micrao CDS/ISIS can be enhanced by interfacing the software with CDS/ISIS pascal programs. TEXT.PAS is one such program, available with Mini-Micro CDS/ISIS, useful in free text search and retrieval. This program has been modified to overcome some of its limitations. The features of the modified program (INFRET.PAS) are described in this article.

Sridhara, B., Makhija, Veena and Pandey, Ajay Kumar inner article, ***“Application of WWWISIS: Web-based CDS/ISIS Bibliographic Databases for Journal Articles”***, of these authors focuses on implementation of WINISIS and WWWISIS on Microsoft Windows-XP using professional Microsoft’s web server for generating and information retrieval system for defense science and technology articles database develop by Defense Scientific Documentation and Information Center, DRDO the database provides and instance access to information on defense-related to DRDO scientists and also focuses on generating a current awareness service, current literature and defense science and technology using Defense Science and Technology Articles Database.

Sur, S.N. and Chowdhury, G.G. in their article ***“A Prototype Design of a Bibliographic Database Based on CCF Using Micro-CDS/ISIS”*** explains design aspects of bibliographic databases are of utmost importance for effective resource sharing and providing better information retrieval services in libraries. Standard formats like CCF may be adopted for design of database. However, experience shows that some modifications to the CCF format may be more useful for manipulation of data for various library operations. Design of a bibliographic database based on CCF for use in Micro-CDS/ISIS has been proposed. Almost all the mandatory CCF fields have been adopted and a few new fields have been

added for achieving better results. Formats for display of records, conform to AACR2. Sample catalogue entries and various sample indexes are provided to illustrate how the proposed design help perform various information retrieval operations in libraries. Modifications, if any, in the display of records may be achieved with little effort.

Sur, S.N. and Sundersingh, B.G. in their article *“The Indian Database Scenario Portrayed Through INDAB”* discuss there is a marked shift from predominantly library based bibliographic information services to generate on of more factual, referral, numeric and multimedia information products. Yet ,comparing with the global developments, we the Indians are just at the starting line.in this article, portrayed through INDAB the indigenous database efforts, their growth and status, availability , opportunities for development, and related strategies have been analyzed. It concludes that given some areas of strength and planned growth, India should have increased opportunities in information services in the years to come.

Yadagiri,A. inner article of author *“Creation of Database and Automation of House Keeping Services In Libraries: A case study of R.E.C. Central Library, Warangal (A.P.)”* was describes, the definition of the database, database management and brief description of steps taken to create database of library’s holdings; automation of housekeeping services like circulation desk, OPACs and cataloguing, etc.; and the latest technology in retrieval of information through multimedia CD-ROM’s and introduction of bar coding system.

Zala, N. Lavji and Patel, R. Niraj inner article of these authors, *“Application of WINISIS/GENISIS Software in Newspapers Clippings”* has describes how knowledge Exchange and Information Centre (KEIC) of Mudra Institute of Communications, Ahemedbad makes the newspapers clippings accessible for its target audiences (users). The bibliographic information as well as full text of the article is recorded in the newspaper module. The whole procedure is done in WINISIS software and then the data is converted/up-loaded in GENISIS software to make accessible the web-catalogue of newspaper clippings for its end-users. Over the period of time using CDS/ISIS software (DOS, Windows, GENISIS versions) which type problems were faced and resolved, the merits and demerits of every version, etc., have been discussed. In the age of information technology, the I.T. Professionals and other organizations are designing effective but very costly software. The small library does not have capacity to carry too much financial burden by purchasing these types of software. However they wish to get their libraries automated and make the resources available to their users by applying very cost-effective software. In this article how the CDS/ISIS software become a boon for this types of information providers and information receiver has describes also focuses on every stage of evolution of CDS/ISIS and its successful implication in KEIC.

Chapter-3

General Overview of CDS/ISIS for Windows

3.1 VERSIONS OF CDS/ISIS FOR DOS AND WINDOWS

CDS/ISIS for Windows is an information retrieval package developed by UNESCO (the United Nations Educational, Scientific, and Cultural Organization) which runs under Microsoft Windows. Version 1.4 (release 19) was circulated on CD-ROM to distributors in March 2001 and is dated January 2001. This followed version 1.3 which appeared in January 1999 and was the first formally-released version of the package, though beta-test versions had been available to existing license holders for some time. Version 1.0 was released in 1998. It is designed to run in Windows environment.

The version is release 19b which is available to license holders from UNESCO's FTP site and which corrected some bugs in release 1998.

The package has many features, which distinguish it from commercially produced software. To understand why, it is necessary to look at the history of the package.

CDS/ISIS for Microcomputers was released by UNESCO in 1985. It was called officially **CDS/ISIS Mini-Micro Version** but is usually called **CDS/ISIS** or simply **ISIS**. In Latin America, where the minicomputer package **MINISIS** (developed in Ottawa, Canada, by the International Development Research Centre) is prevalent, the original DOS version was always called **Micro-ISIS**; the Windows version is called **Micro-ISIS** or **WINISIS**.

3.2 CDS/ISIS FOR WINDOWS

Since 1989, when most new microcomputers were supplied with a new operating system called Microsoft Windows, it was inevitable that the users of CDS/ISIS would call for a Windows version, and UNESCO began to develop one in 1995.

Unlike the DOS version, ISIS for Windows is not written in Pascal but in a combination of languages, primarily C and C++. Following the philosophy of the DOS version, a program library is available of programs which can be utilized in the user's own routines in a similar way to that in which Pascal was used in the DOS version. BIREME (the Latin American and Caribbean Center for Health Sciences Information) has cooperated with UNESCO in developing this 'library' and a Dynamic Linked Library (ISIS_DLL) is available containing these routines.

3.3 OPERATIONS OF CDS/ISIS FOR WINDOWS

CDS/ISIS for Windows is, as its name implies, a **Windows-based system**. Windows programs have many distinctive features as a result of the Windows operating system. Microsoft Windows is described as a **graphical user environment**, which gives user more control over the work as well as enabling user to use more of the power of the computer. It allows running more than one program at the same time. Thus it allows user to have more than one CDS/ISIS database open. Work appears in a **window**, which may be enlarged, diminished, activated, or put on hold whilst other windows are opened and programs there run. Because more than one program may be available on the screen it is possible to transfer data or images from one to another. As well as using the computer's keyboard, the user can employ a mouse to move windows around the screen and to activate or de-activate windows. Within a Window there are **drop down menus** also activated by the mouse. A number of drop-down menus are accessible from

the bar at the top of each window. They are accessed by a single click of the mouse with the pointer controlled by the mouse on the relevant word at the top of the window. Alternatively pressing the {Alt} key and keying the underlined letter in that word will 'open' the menu. As shown in (fig. 3.3.1)

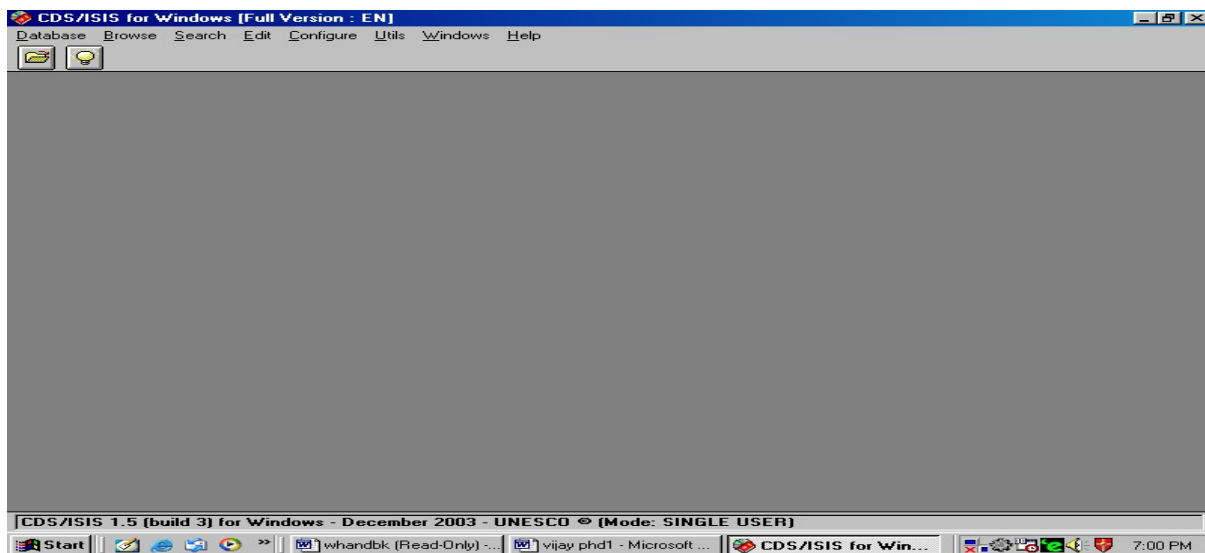


FIGURE 3.3.1 MAIN WINDOW FOR CDS/ISIS FOR WINDOWS

3.4 THE WINDOWS VERSION: THE MAIN MENU

CDS/ISIS for Windows has been loaded on user computer and that the machine has been switched on and Windows is running. Open the CDS/ISIS for Windows program by clicking on the WINISIS icon. This will run the program and display the main menu.

Let us look at the drop-down menus from left to right.

Database leads to the functions associated with a database. In other Windows programs, this would usually be F for File.

If user has just opened the program by clicking on the WINISIS icon, will have only four options, **Open**, **New**, **Printer Setup** and **Exit**. Other options are

greyed out as shown in (Figure 3.4.1) Will see them in a light shade of grey in contrast with the black of other menus. This is a convention used by most programs which run under Windows which indicates that option is not at that time available. There may also be a list of the last five databases open on which may also click to retrieve one. These will always be in black.

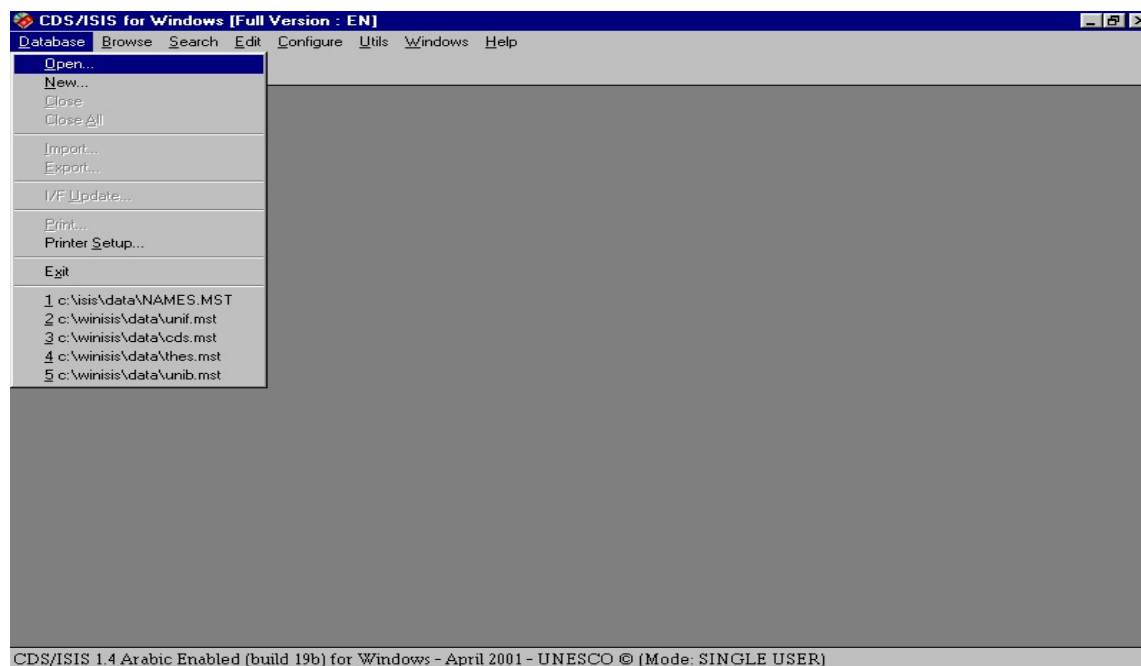


Figure 3.4.1 Opening screen with database drop-down menu

User open a database by choosing **Open**, or the icon on the very left of the tool bar, a picture of an open card file. This brings up a Window entitled File Selection (Figure 3.4.2). This is in the usual Windows format giving the possibility of browsing through drives and folders to find the appropriate 'file name' which will be an **mst** file or a **par** file. It will be set to the folder named in parameter 4 of the **syspar.par**. When user has clicked on a database to open it, all options under **Database** will become accessible as in (Figure 3.4.2). User will see at the same time as a database is opened that more icons appear on the tool bar.

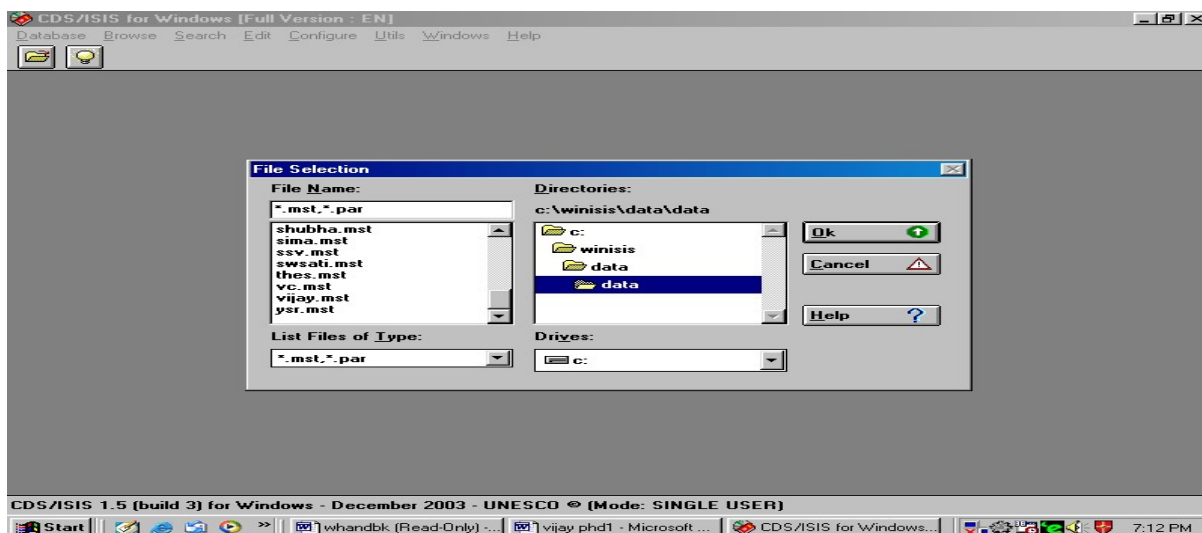


Figure 3.4.2 File selection Window

Close and **Close All** are self explanatory and result in the closing of one or all databases. The other functions which become available are **Import**, **Export**, **I/F Uppdate** (i.e. Inverted File Update) and **Print**. Print is conventionally found on the left hand drop down menu in Windows applications and the other options here are for file maintenance, adding to a file, extracting a file and indexing the database. **Exit** will close the CDS/ISIS for Windows program and take user back to the Windows desktop.

Browse ({Alt b} from the menu bar) has nine functions which cannot be operated unless a database has been opened. Click on **Database** to view the records in a database in database order. Click on **Search results...** to go to a list of previous searches from where user may view the records retrieved by any earlier search in that session. User may mark any records that his view. Then user can click on **Marked records** to view only those that have been marked. Or user can revert to all records retrieved by selecting **All records**. User may open the dictionary by clicking on **Open dictionary** to see which terms have been indexed in which fields. **Split/Unsplit view** allows user to toggle with the lower portion showing either the display in ASCII characters only or the print format

specification. **Print current page** will print the record users are viewing though may not always print it quite how user see it on the screen. **Zoom In** and **Zoom out** will make the font larger or smaller. Along with **Search**, this menu is equivalent to Information Retrieval Services in CDS/ISIS for DOS. As shown in (Figure 3.4.3)

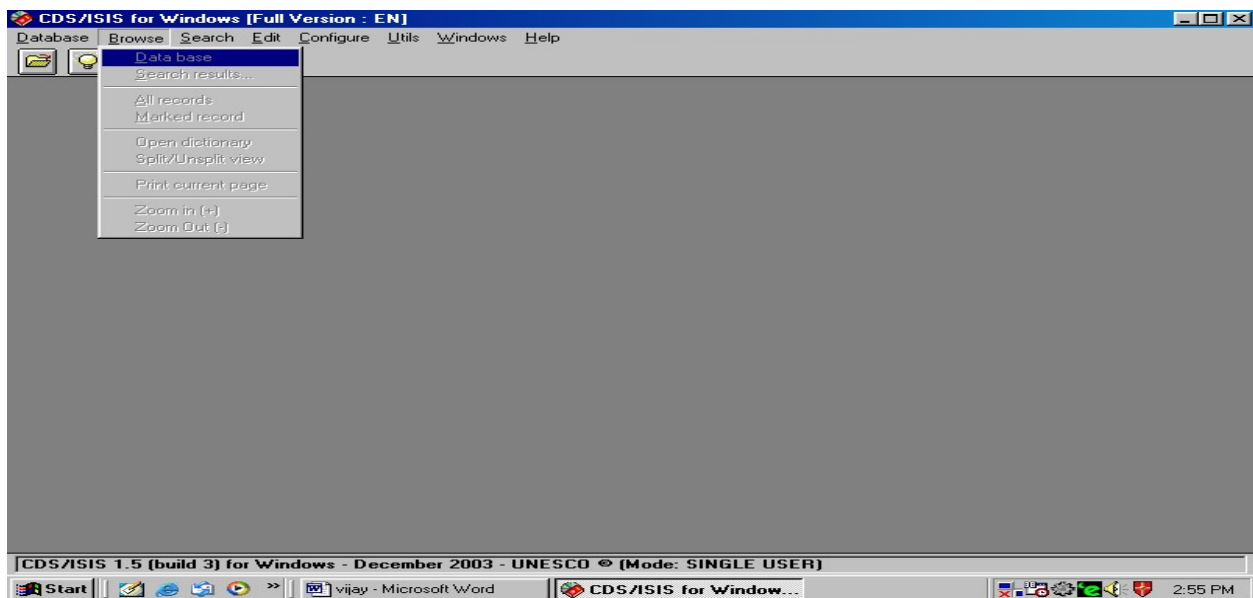


Fig. No.3.4.3 Browse Option Window

Choose **Search** {Alt s} and user will have access to two kinds of search, **Expert Search** or **Guided Search**. It also allows user to go back to a previously saved search (the search may have been saved at any previous occasion) **Recall saved search** or to save the results of the present search for future use: **Save search**. As shown in (Figure 3.4.4) **Close Search Window** is no mystery: it allows user to close the expert or guided search window when user wish to look through the records user have retrieved.

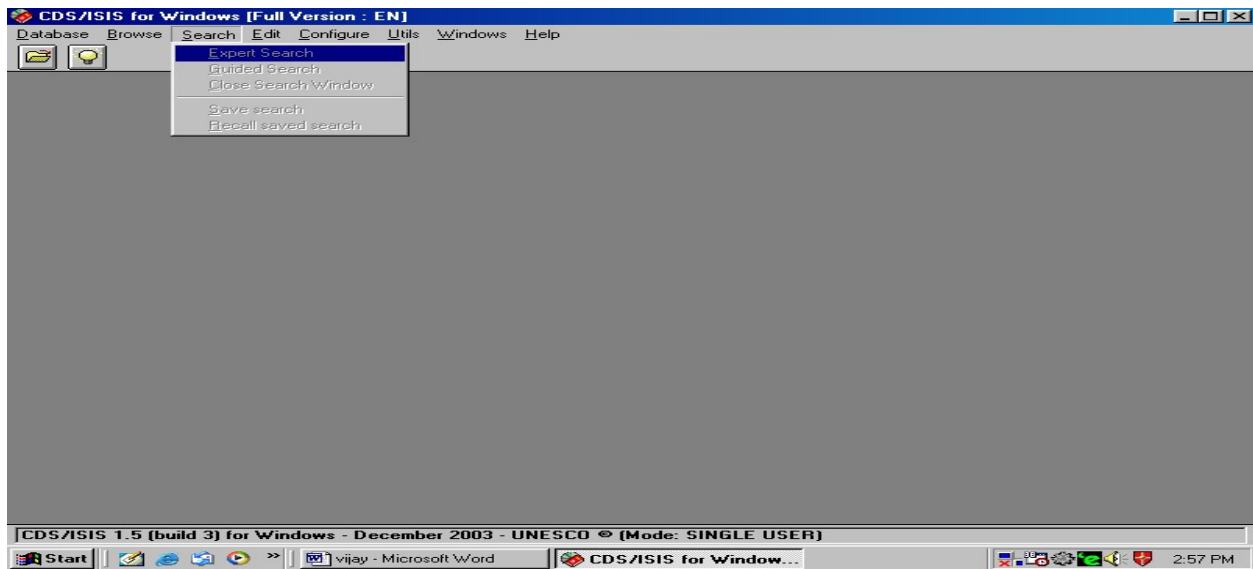


Fig. No. 3.4.4 Search Window

Edit {Alt e} is the gateway to Data entry and modifying the database structure. (If user is running in **read only** mode, user will not have access to this menu.) Data entry functions are accessed by **Data entry** to call up the Data Entry window which lets user edit the record user were looking at in the browse or search window or lets user create a new record. **Delete** will delete the record user are looking at in the data entry window. User can also copy the record user have on screen into the Windows clipboard with **Copy to clipboard** or clear the clipboard by choosing **Clear clipboard**. As shown in (Figure 3.4.5)

From this drop down menu, user can modify the database user are in via the Field Definition Table or Field Selection Tables. User can also edit or add new Print Formats.

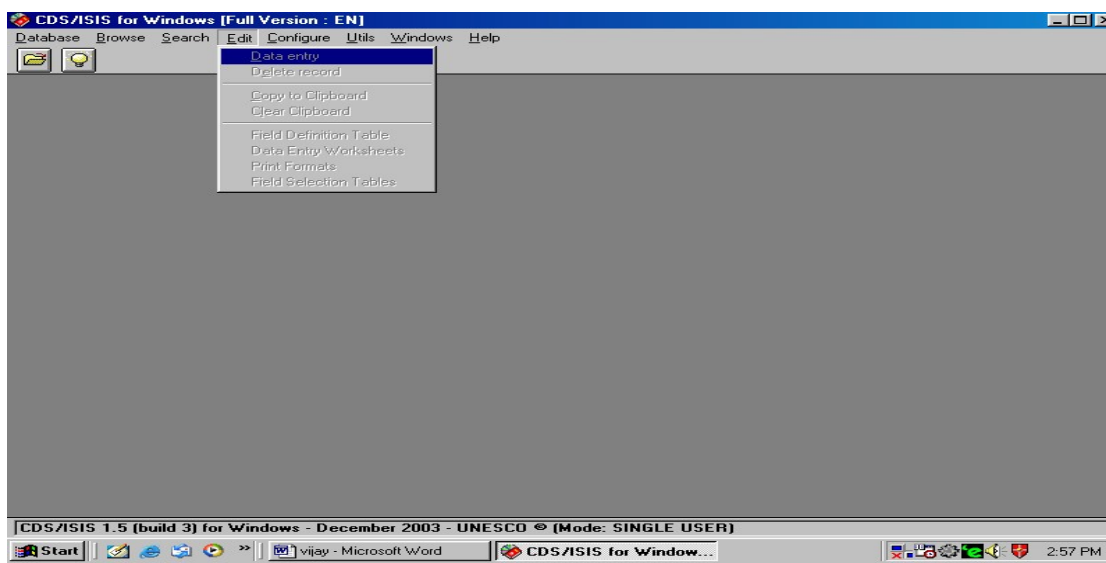


Fig. No. 3.4.5 Edit Window

Configure {Alt c} allows user to change the language of the menus and other features of the database including removing the ability to edit a database from the menus, to make the database read-only for that user. (The ability to read and write to the database will return next time the software is run.) User can also change many other system settings.

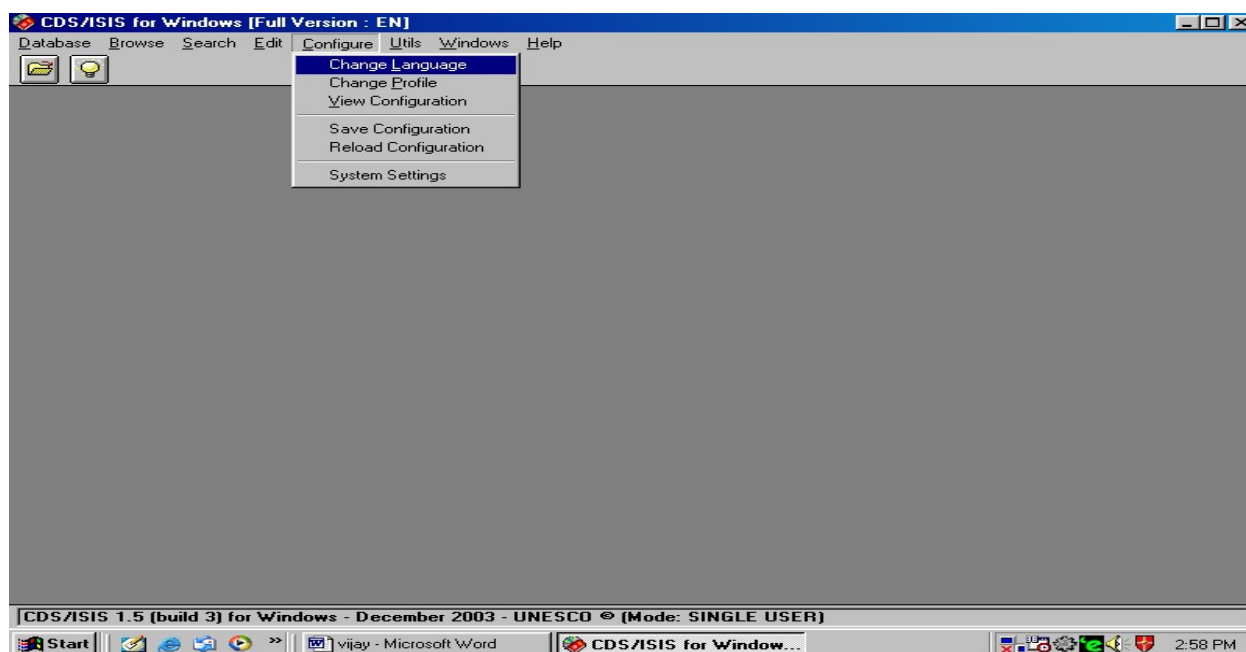


Fig. No. 3.4.6 Configure Window

Utilities {Alt u} includes global additions and deletions based on record number or a previous search. Also included is the facility to compile ISIS/Pascal programs (in CDS/ISIS for Windows these are all print format programs). User can also export records to an XML file and unlock databases or records. These unlocking functions will be greyed out and inaccessible if **Data entry** is open. As shown in (Figure 3.4.7)

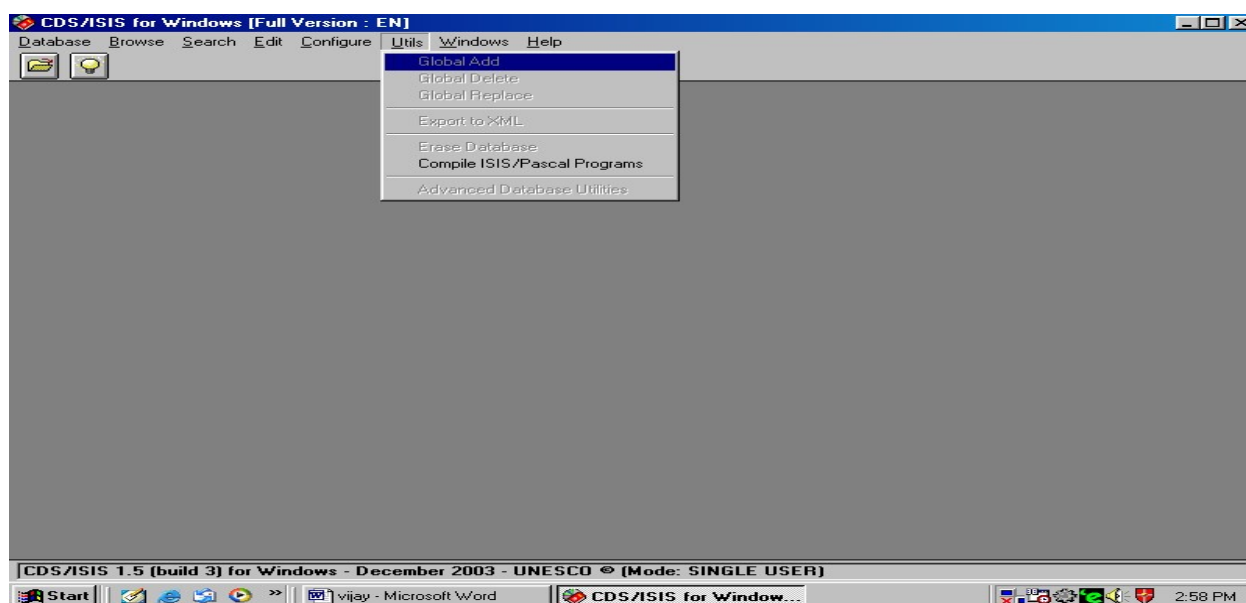


Fig. No. 3.4.7 Utility Window

Windows {Alt w} allows the windows open to be arranged on the screen. This is the usual Windows program facility. The windows on the screen may be arranged from left to right (horizontally) one above the other (vertically) or cascaded (one above the other but diagonally offset so that all may be seen in part and the top one in full). As shown in (Figure 3.4.8)

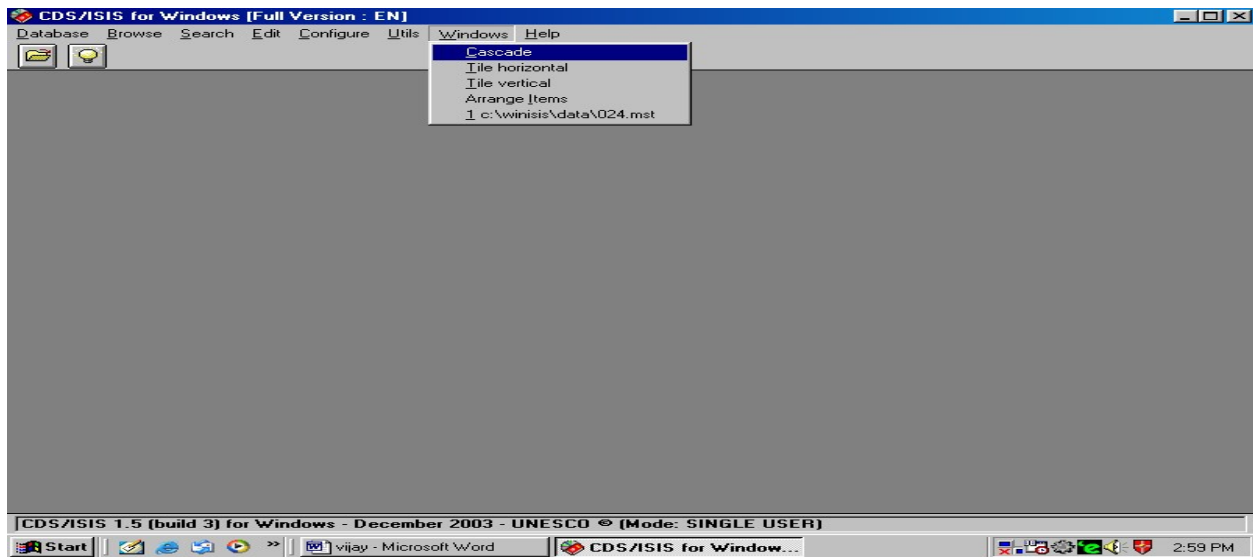


Fig. No. 3.4.8 Window

Finally there is a **H**elp drop down menu in the usual Windows style with a contents list and a keyword search. At the time of writing, the Help text is considerably lagging behind the current version. As shown in (Figure 3.4.9)

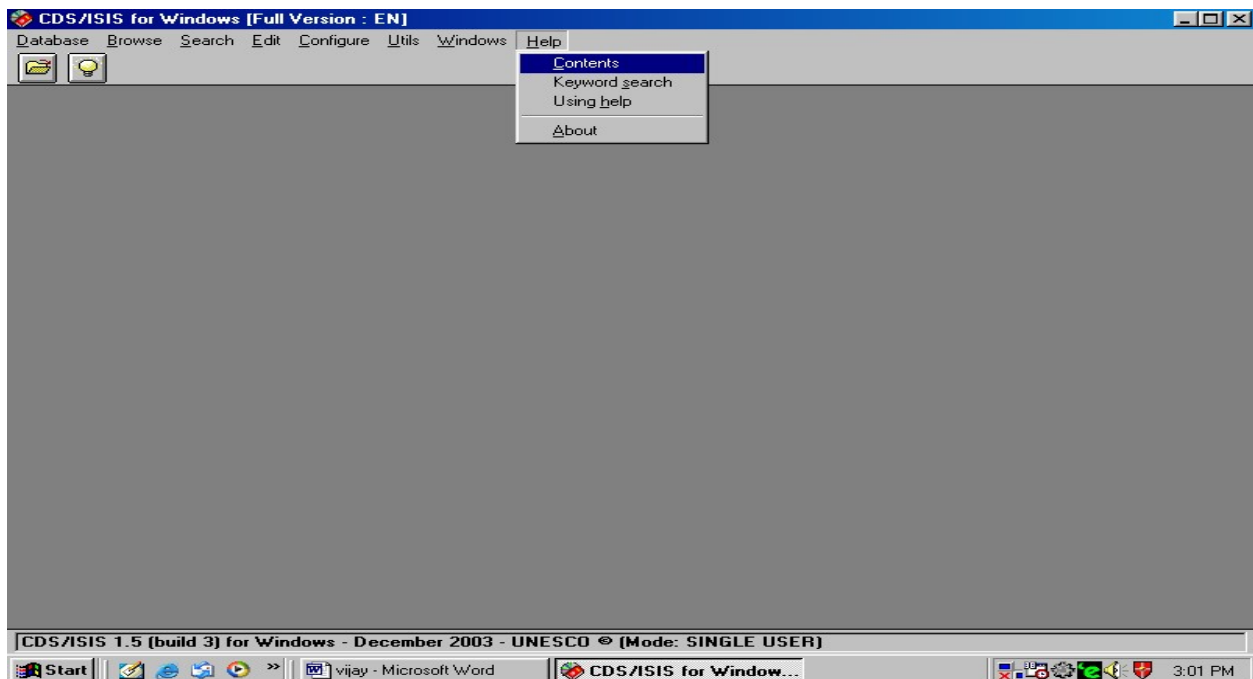


Fig. No.3.4.9 Help Window

References:

1. Buxton,A. and Hopkinson, A. The CDS/ISIS for Windows: a hand book for librarians,Paris,UNESCO,2001,p.p. 45-49.
2. Reference Manual on Mini-Micro CDS/ISIS 3.0. National Information system for Science and Technology; New Delhi, NIS,2001,p.p. 76-81.
3. Aswal, P.S., CDS/ISIS for Windows : A handbook for Librarians, New Delhi, ESS-ESS Publication, 2003, p.p.10-18.
4. Anandan, C. and Gangatharan, M. Digital Libraries, New Delhi, Kanishika, 2004, p.p. 7-9.

Chapter-4

Creating Database

A database is usually constructed to store information about some things or persons. For example, a bibliographic database contains information about documents, such as journal articles or conference proceedings. A personnel database contains information about employees. The database consists of records and there is generally a one-to-one correspondence between the records and the things described. In a bibliographic database one record may correspond to one journal article: in a personnel database one record may correspond to one employee.

The structure of the “A design bibliographic database of Ph.D thesis awarded by Sant Gadge Baba Amravati University, Amravati. Since 1983 to 2011. The study was taken in wider context including faculties of Social Science, Commerce, Education, Law, Engineering and Technology, Science, and Ayurvedic Medicine by using Unesco’s WINISIS (Window version of CDS/ISIS)a menu driven generalized Information Storage and Retrieval System. The major advantage to design the database in WINISIS is that it is free from writing computer programming for implementation the system as per the local need of any library. The system can be implemented at any place even if the person has little or no prior computer experience. The complete detail of designing this database and then retrieval of information is discussed below.

DATABASE STRUCTURE

The proposed design of the database facilitates various information retrieval operations. The display format has been designed such that data can be displayed according to AACR-2 as far as practicable. Thus the proposed design of the database covers four components.

- the Field Definition Table (FDT)
- the Data Entry Worksheet
- the Display Format
- the Field Selection Table (FST).

Steps Taken to Create the Bibliographic Data:- The following steps were taken to create the bibliographic database of Ph.D's awarded by Sant Gadge Baba Amravati University, Amravati.

Collection of Data:-

After stated the research problem first of all researcher was collected the data which has regarded to research problem from the Central Library and Ph. D. Cell of Sant Gadge Baba Amravati University.

Software Selection:

A decision in selecting the software package is an important role for creation of Database. The application of software is one of the important critical subsystems which play a dominant role in creation of database. There are many packages available commercially in the market. The CDS/ISIS for Windows was selected by the researcher because it has distinctive features of Windows.

FIELD DEFINITION TABLE (FDT)

The FDT defines the fields that may be present in the database and certain parameters for each field. Thus the proposed design of the database covers

- almost all the mandatory fields in the CCF,
- some of the optional fields, and
- some newly added fields which have been considered necessary.

For defining the FDT the values are entered in the boxes which are as follows:

(a) Tag – A tag is a field identifier in the database tag is used to identify the field that is containing the bibliographical details of document. To select the number, or type it in the up and down arrows can be use.

(b) Name – Name is the name of the data fields this is to help for identify the field. It can be up to 31 characters long and can contain spaces. When to set up the data entry worksheet, this name will be used as the prompt for the field. It is also used to specify the field in the “Guided Search” form.

(d) Type. - Typ column indicates the type of field such as alphabetic, numeric or alphanumeric. In the CDS/ISIS the field type is a one character code, the field type may be one of the following.

X-Alphanumeric,

A-Alphabetic,

N-Numeric.

(e) Rep -Rep stands for ‘repeatable’ it allow multiple occurrences of this field, e.g. several authors or several descriptors etc.

(f) Pattern/subfields. In a pattern field, the contents of the field have a specific predefined pattern. If the field are dividing into subfields, should list the subfields here (without punctuation or spaces) e.g.

abc

If subfields are not using, press the TM key to leave this box blank.

When entered the data for each field, the focus will be on the **Add** button. Either click the button or press {Enter} to add the field to the table (displayed in the large box). If it has need to correct the details for any field, just click on that entry in the large box and the details will be copied into the boxes used for editing. If needed to remove an entry, highlight it and click the **Delete Entry** button.

Creation of Field Definition Table:

In this step the researcher has to select and define the fields and sub-field as a name work and alphabets like (a,b,c,d.....z) respectively which are essential for searching the database i.e. Title, Name of Research, Name of Guide Year of award etc. and also the details all about Ph.D. thesis as shown in figure 4.1.

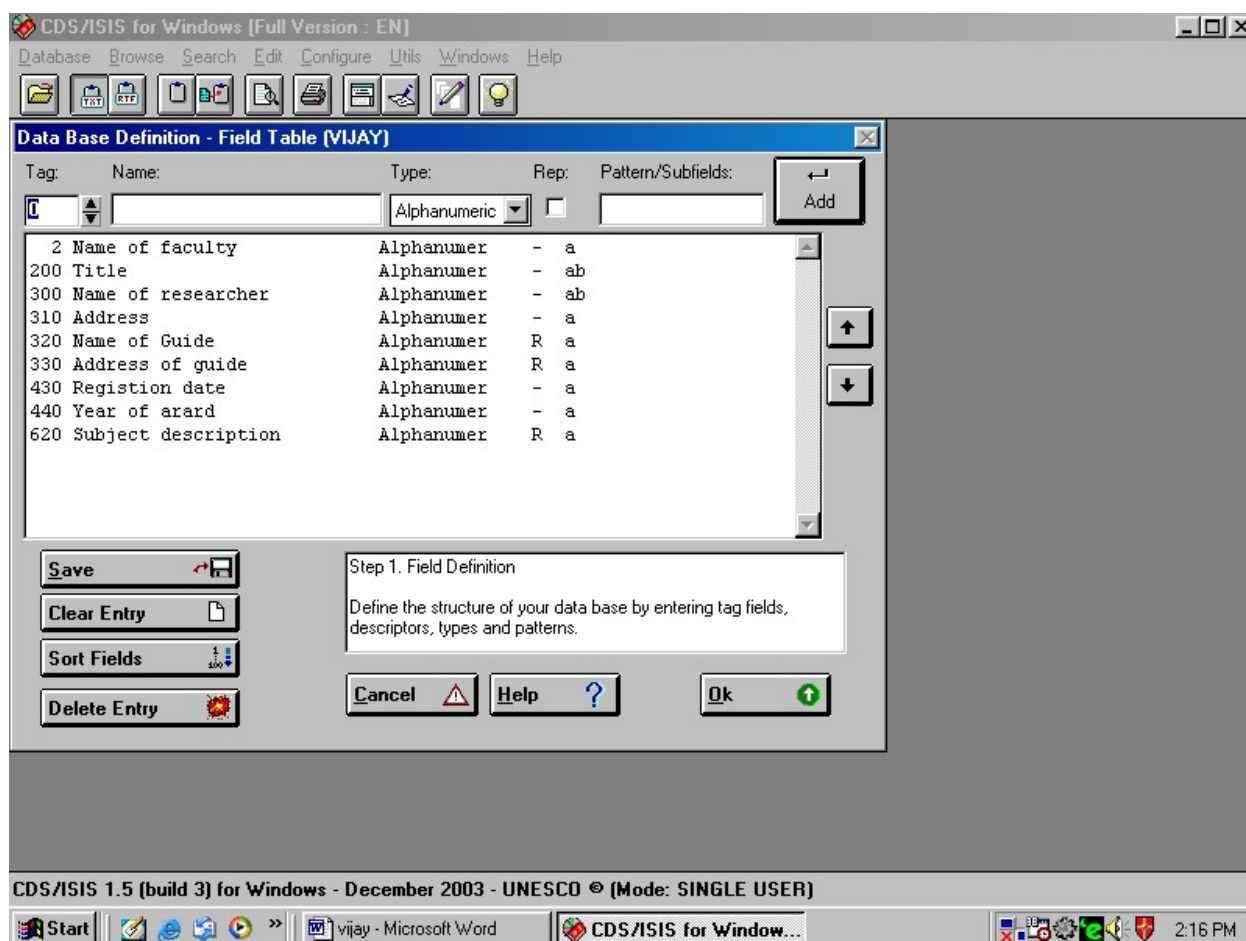


Fig. No. 4.1 Field Definition Table

Data Entry Worksheet:

Data entry worksheets are used to enter records or modify records in a database. The data entry worksheet is the electronic equivalent of a pre-printed form for entering data. Once exit the FDT, the system will automatically activate the worksheet creation process and will prompt you to create the data entry worksheet to be used for inputting records in to database. in this step the fields defined in FDT are selected for preparing the worksheet, which is the media for entering the bibliographic data of Ph.D. thesis in the database. This step also facilitates to avoid the fields which are present in FDT but currently not useful for data entry and also facilitates to add it in worksheet. For that single arrow towards right side and single arrow towards left side as shown in (Figure 4.2)

Creation of Worksheet:

In this step the fields defined in FDT are selected for preparing the worksheet, which is the media for entering the bibliographic data of Ph.D. thesis in the database. This step facilitates to avoid the fields which are present in FDT but currently not useful for data entry and also facilitate to add them in worksheet when required. For that purpose single arrow towards right side and single arrow towards left side are given as shown in figure no. 4.2

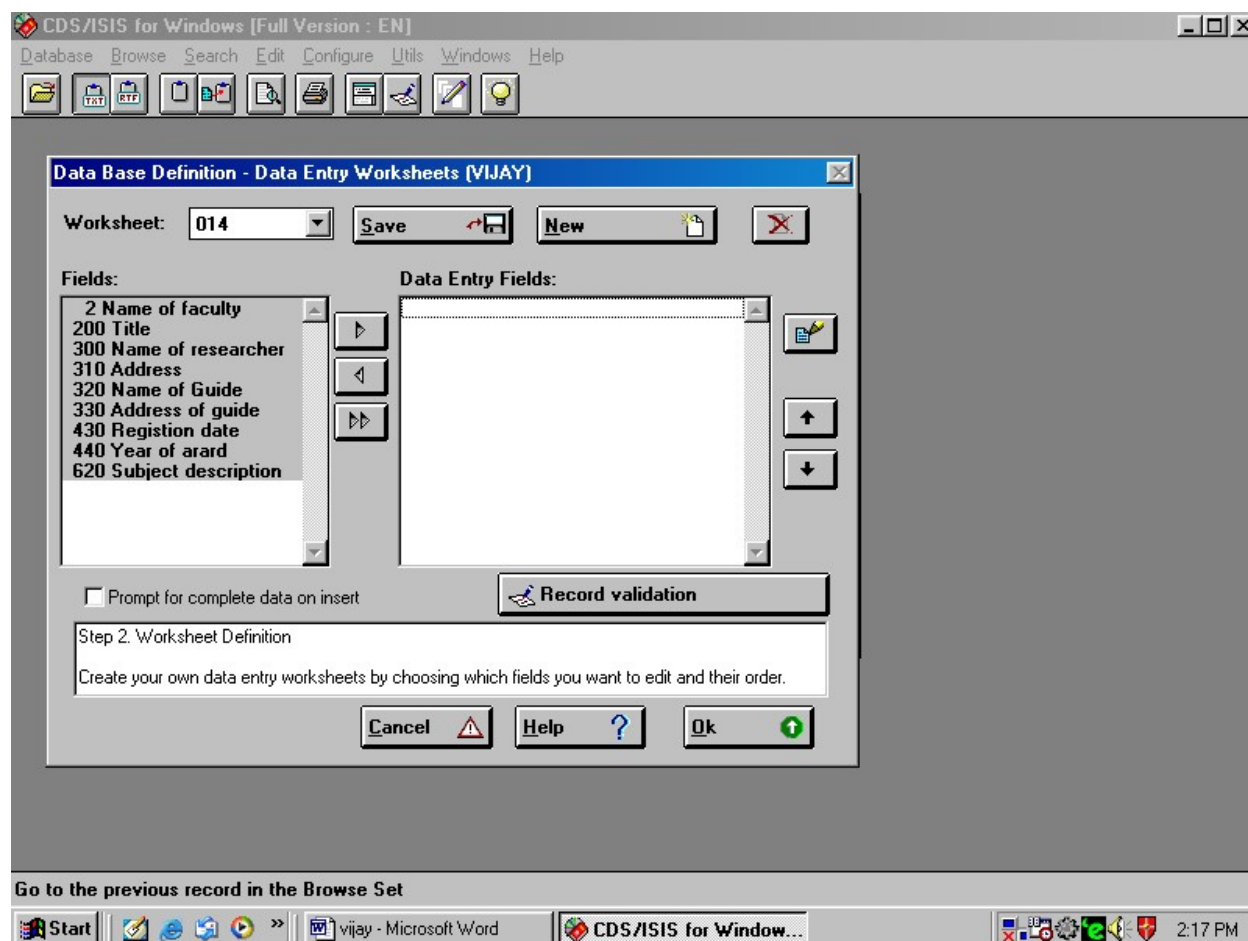


Fig. No. 4.2 Data Entry Worksheet

Display Format:

Once the worksheet is created the system will prompt to create the default display format. This step facilitates to create display format. A format essentially specifies how the contents of a record are to be displayed at the time of retrieval. It

is also used to specify how a record has to be printed. The display format could be as below.

Creating Display Format:

This step facilitates to create Display format, according to the requirement of user's output of bibliographic database of Ph.D. thesis. The software has its inbuilt display format like normal style, CDS/ISIS Dos compatible, Decorated format, HTML Normal and HTML table with Header; besides this the searcher or the user can develop the Display for as he required i.e. as per AACR-2, CCF or any other standard. But to develop Display format researcher has to determine the keys used for developing display format.

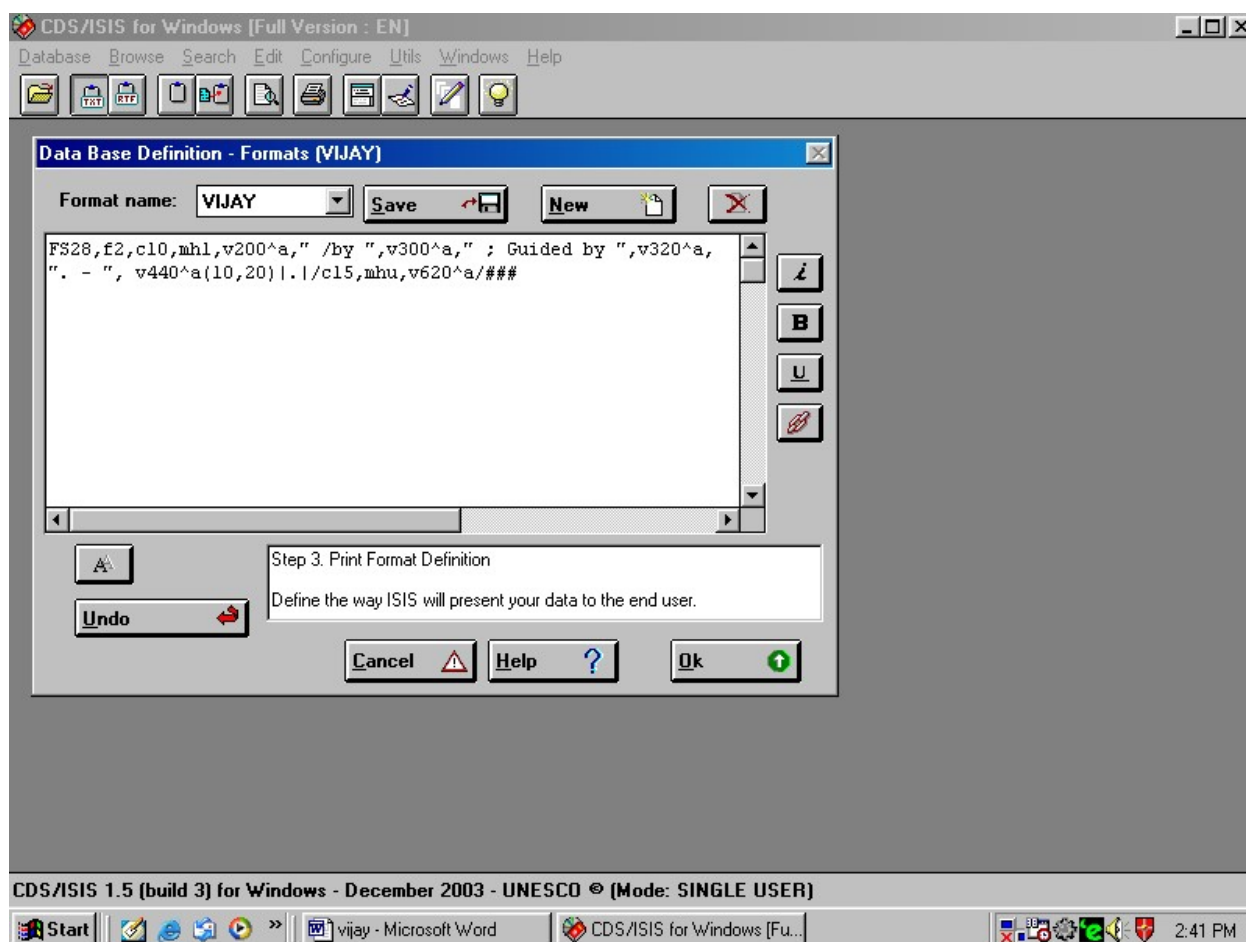


Fig. No. 4.3 Display Format

Field Selection Table (FST)

The last step in the creation of a database is to define the FST(Field Select Table).This step involves selection of fields for searching point of view. FST is a combination of display format technique and indexing technique. This step involves selection of fields, which are useful for searching the database i.e. Author, Title and Keywords etc. as shown in (Figure 4.4).

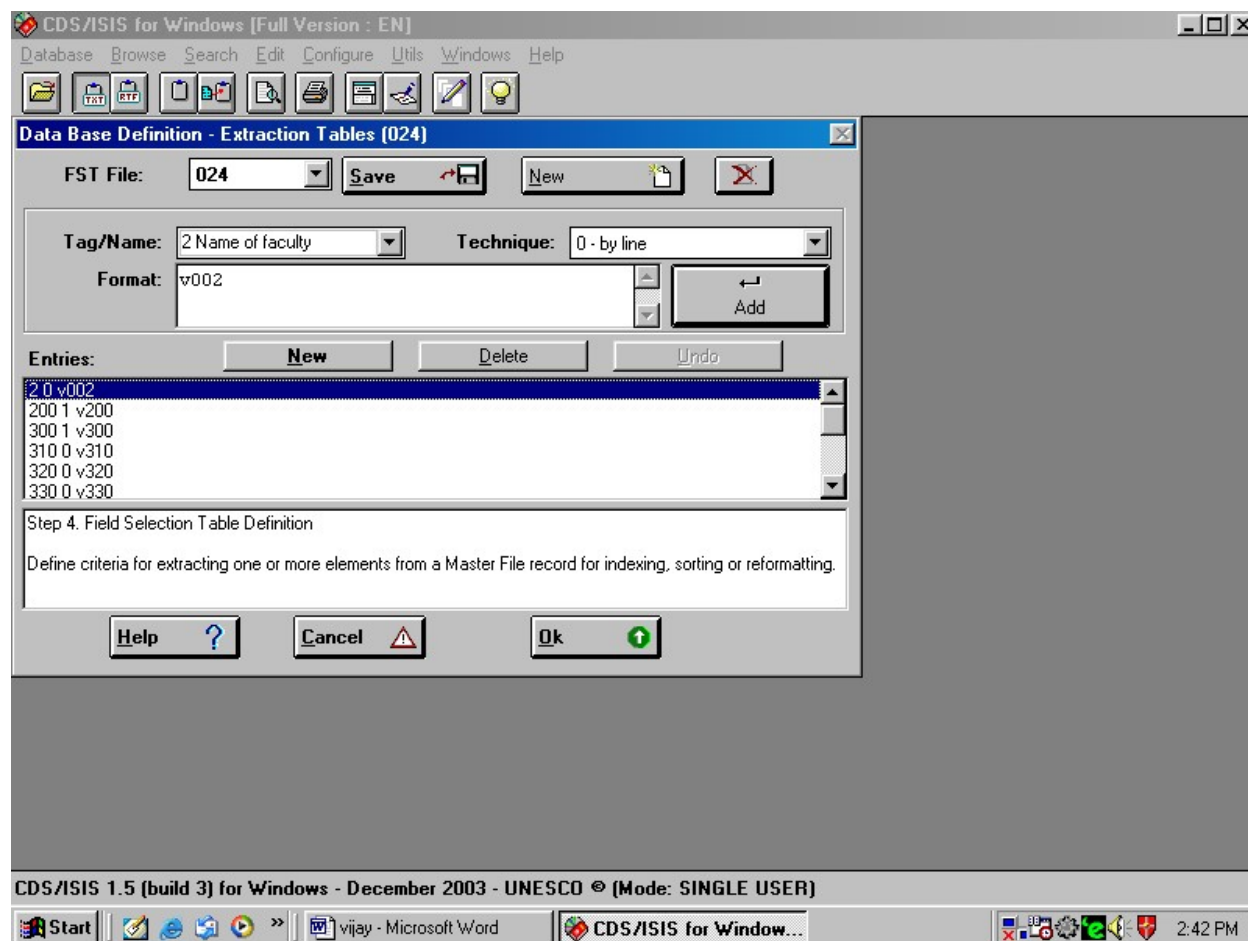


Fig. No. 4.4 Field Select Table

Creation of Data Entry:

Once the structure of a database has been defined, records can be input into the database using Data Entry Services. Data entry permits addition, modification, editing and deletion of records. This function is available in the 'EDIT' menu of the WINISIS software. While entering the data in field and sub-field the key “ ^ ” (cap) is used before the alphabets used in FDT to denote the sub-fields. Mistake in

data entry directly affect the output of search, but it can be repair with the help of Edit Menu as shown in (Figure 4.5)

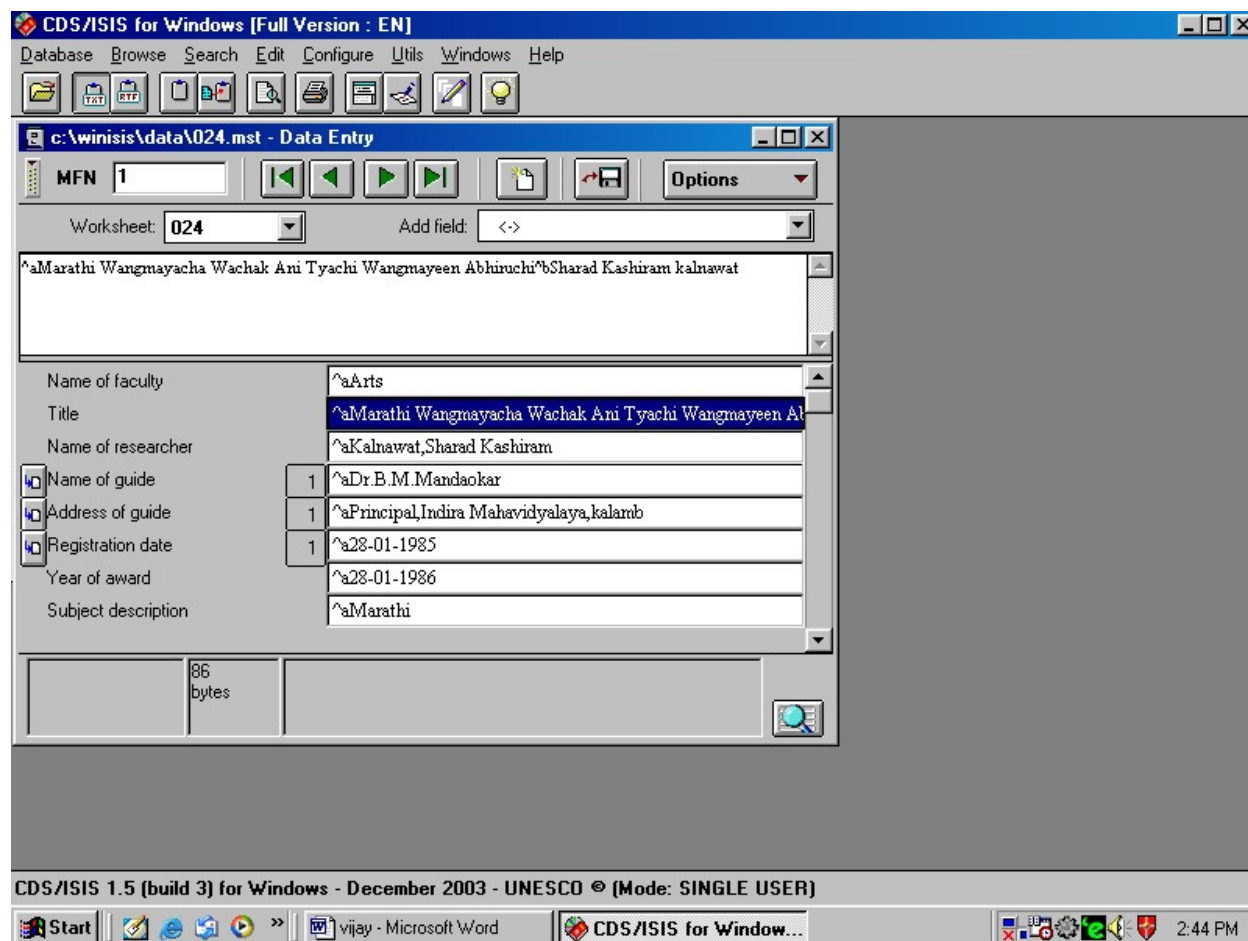


Fig. No. 4.5 Data Entry Window

Developing Search Strategy

It is frequently necessary to combine two or more terms in a search for specific piece of information for that, WINISIS provides expert search and guided search in which logical operators ‘AND’, ‘OR’ and ‘NOT’ are used to broaden or narrow the search denoted by *, +, ^ respectively. Similarly it is also facilitate truncation search denoted by “\$” sign to look for a number of words or terms starting with the same letters as shown in fig no.4.6A and 4.6B.

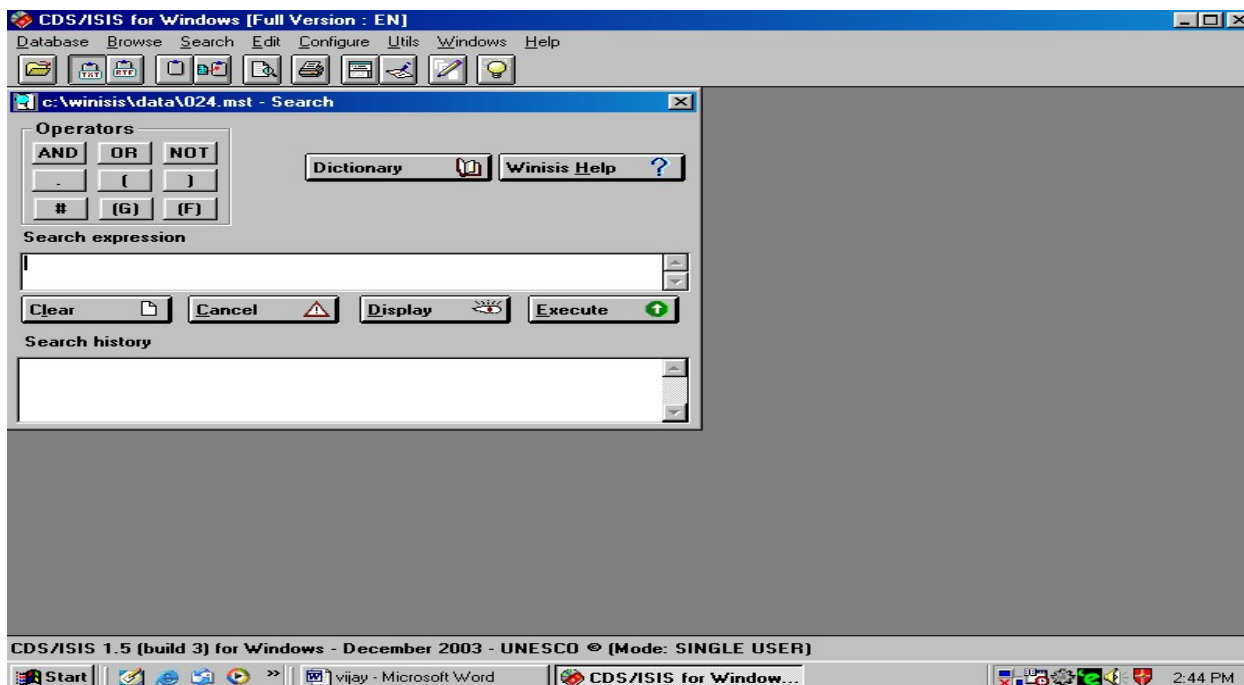


Fig. No. 4.6a :Expert Search Window

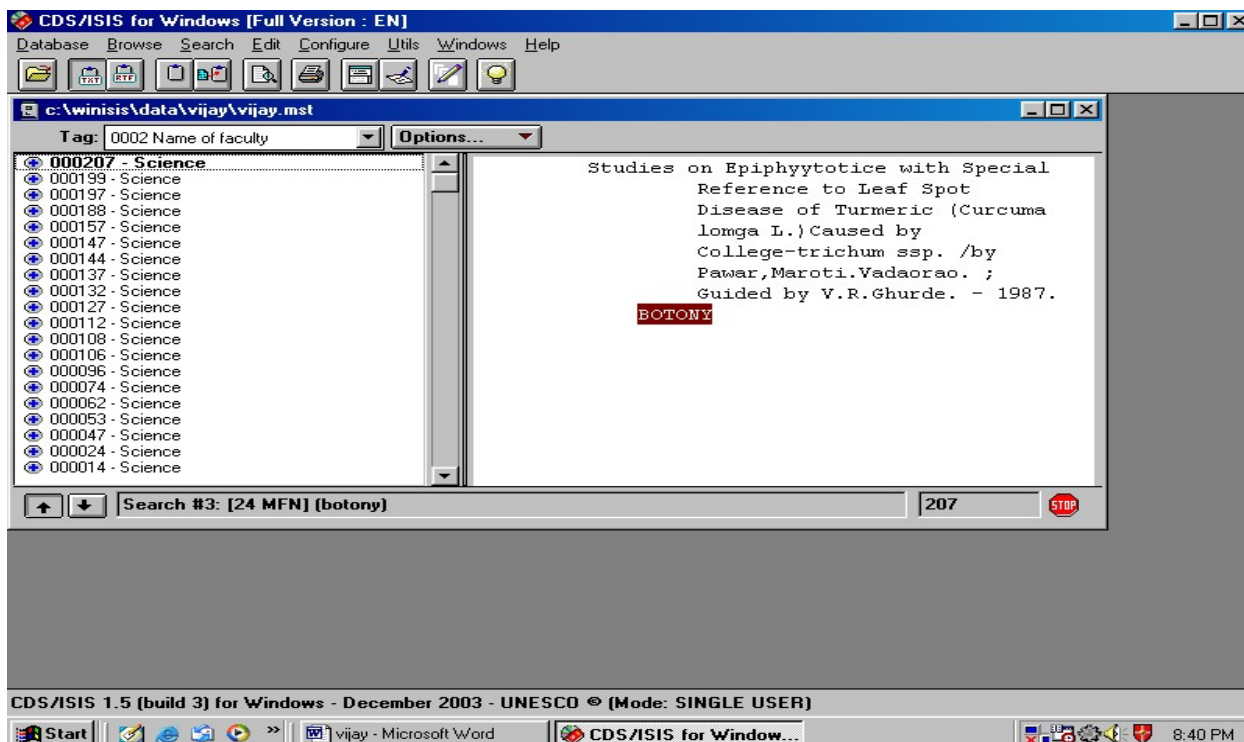


Fig. No. 4.6b Expert Search Result

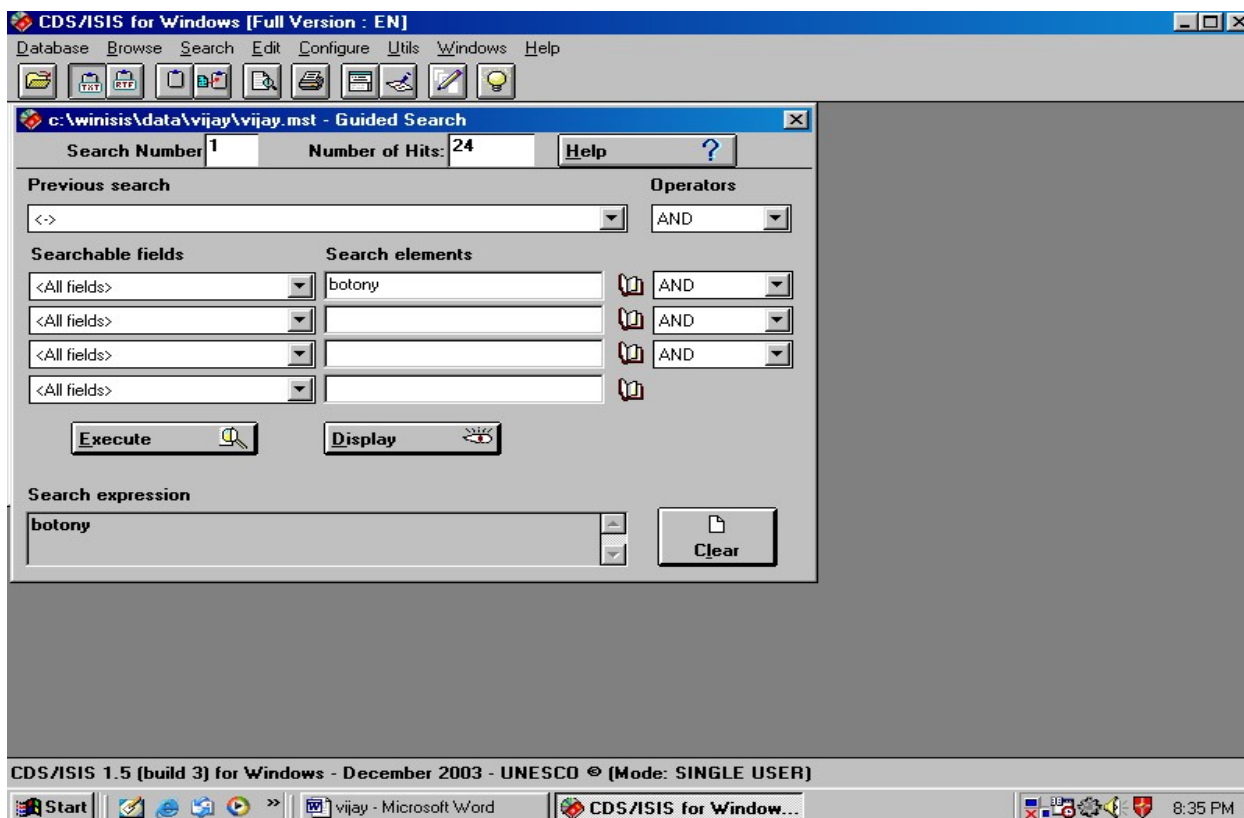


Fig. No. 4.6 c Guided Search

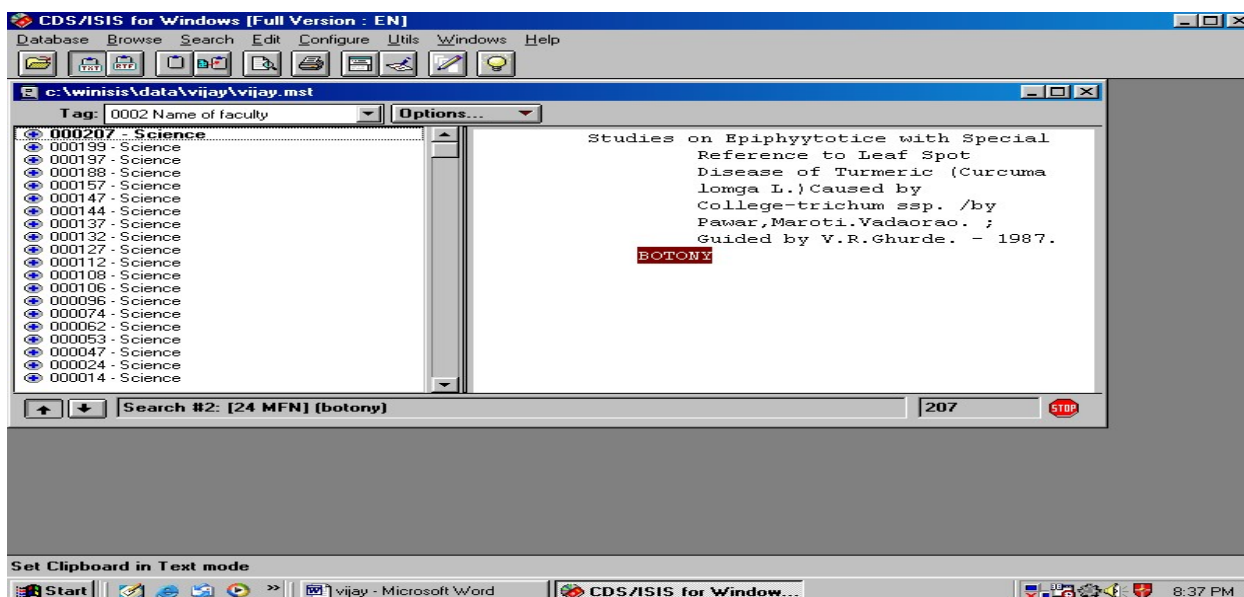


Fig. No. 4.6d Guided Search Result

WINISIS provides the option of Guided Search with the help of this any keyword type in search element all the entries will display with highlighting the terms as shown in figure 4.6c, and 4.6d.

The result of the search, retrieved records and display the list of retrieved items in the left side of the window, by clicking on the items listed one can see the details about the record on the right side of the window as shown in figure no.4.7. Each term searched on is highlighted wherever it occurs in the record even if the search is specified on one field only as shown in the figure no. 4.7.

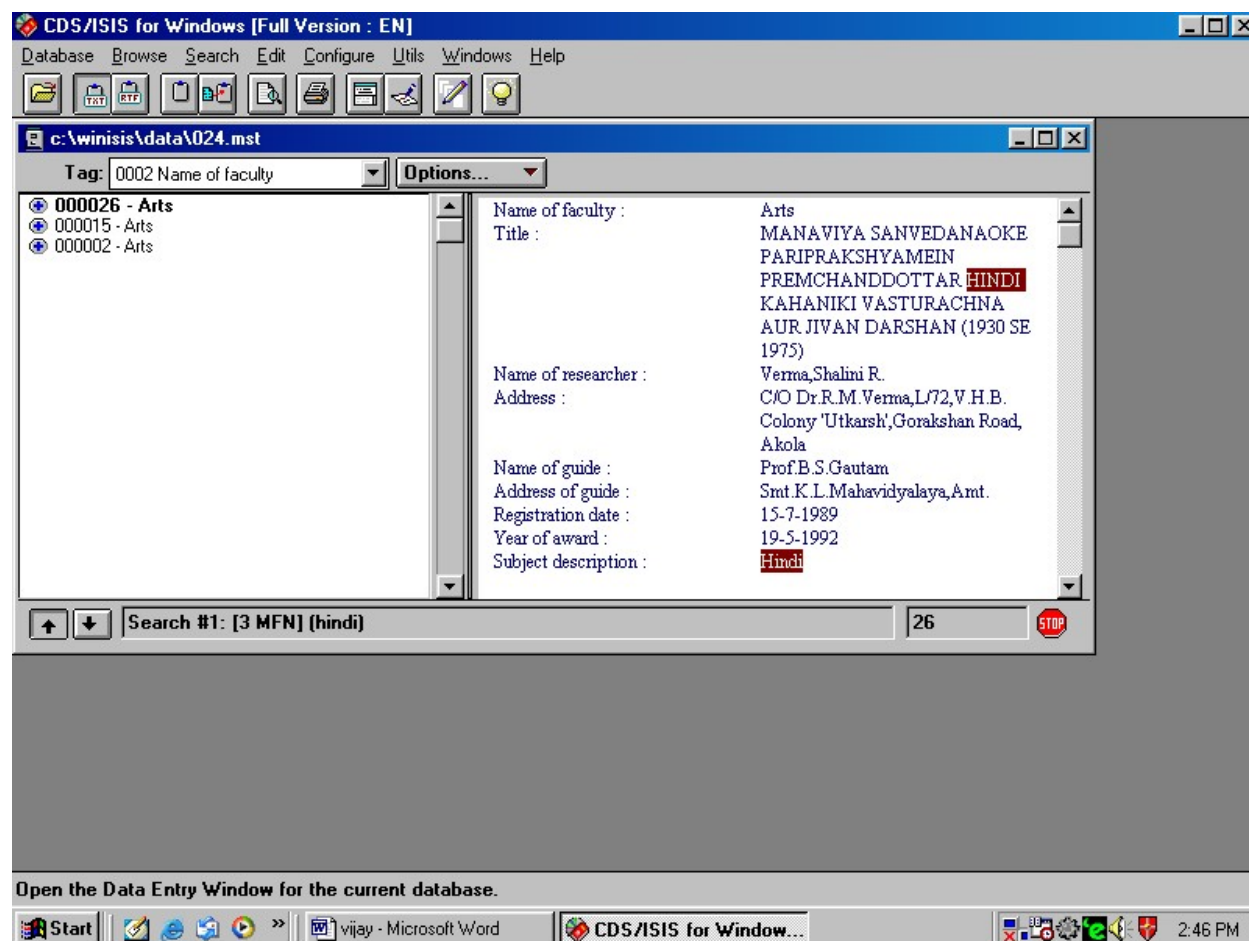


Fig. No. 4.7 Highlighting of Retrieve Terms

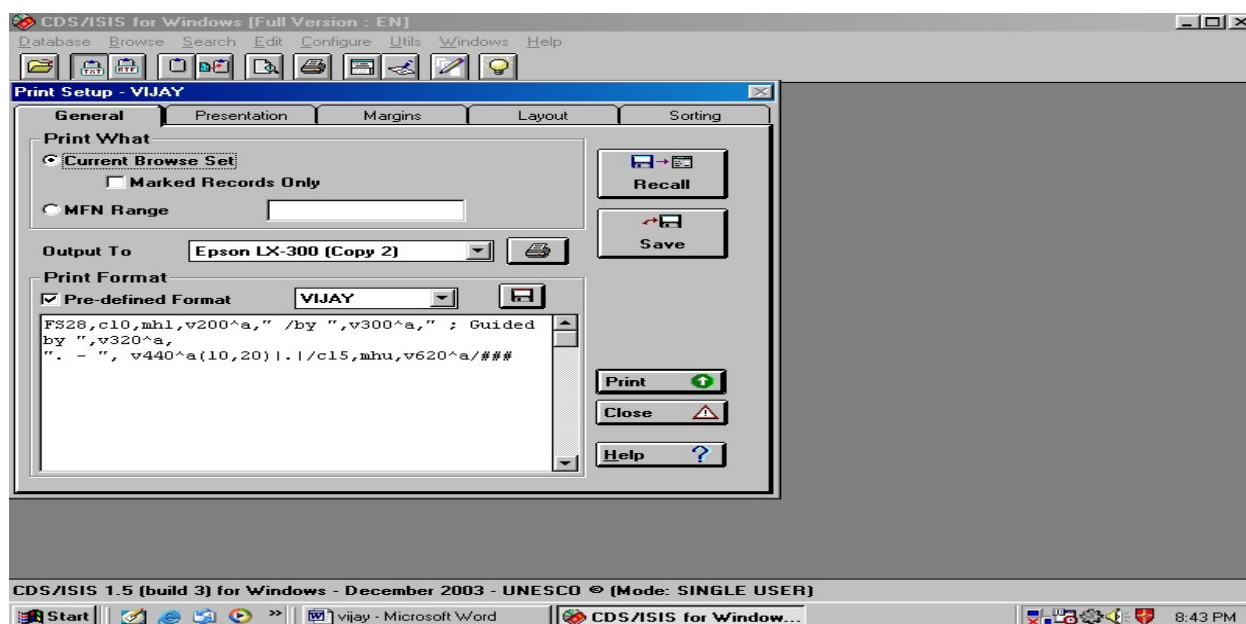


Fig. No. 4.9 Sorting and Printing (General Setting)

Above window provides the facility of printing setup which has involved, the records with the marks to print, MFN range, selection of printer, selection of formatting language and after all this selection the user can 'save' the setup and able to print the job. This all selection of every provided facilities are setting up by the researcher as possible as better.

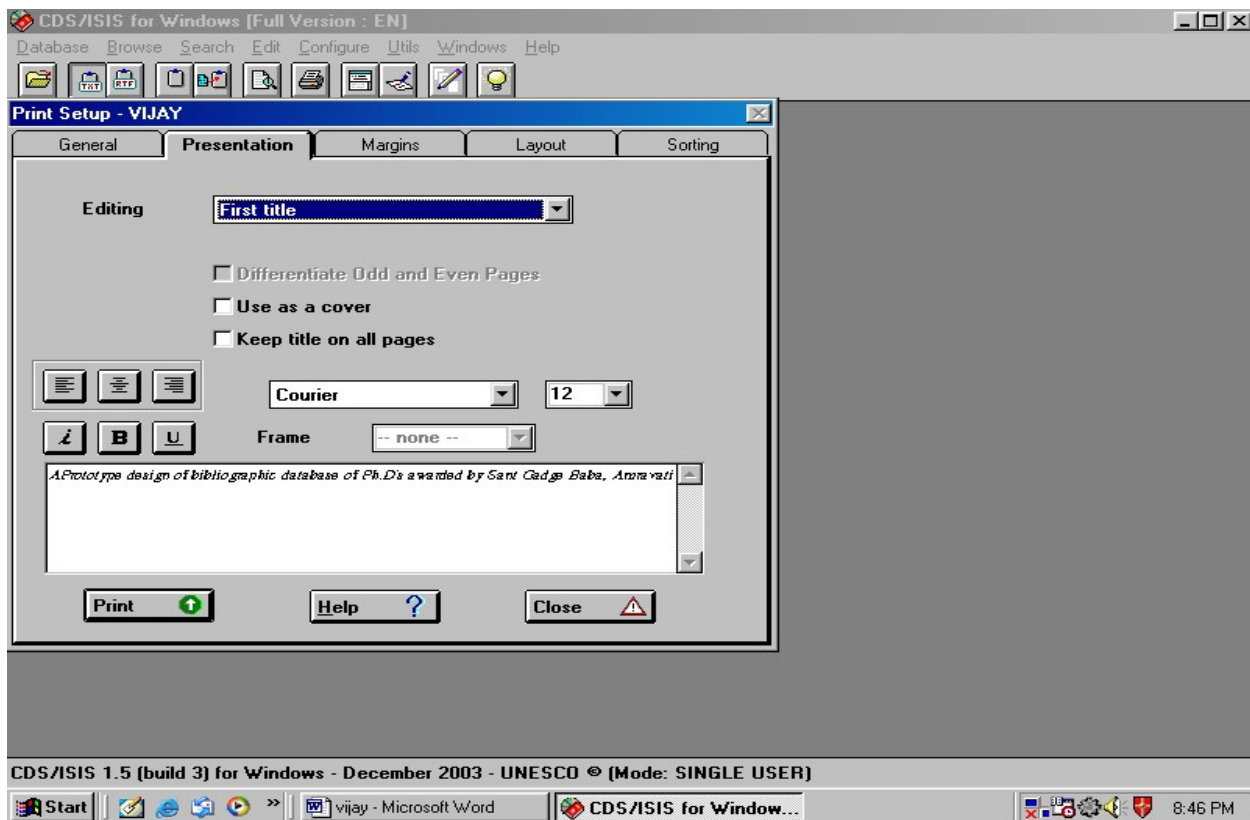


Fig. No. 4.9A

In this window 4.9 a the presentation of printing job on paper has been selected by the researcher to present appropriately the setup which are as follows, Editing-to select the First title, Second Title, Third title of the particular job, the window also provides the font setup i.e. font type, font size, font style, alignment of the paper i.e. left, right or center of text all these has been selected setup of the researcher.

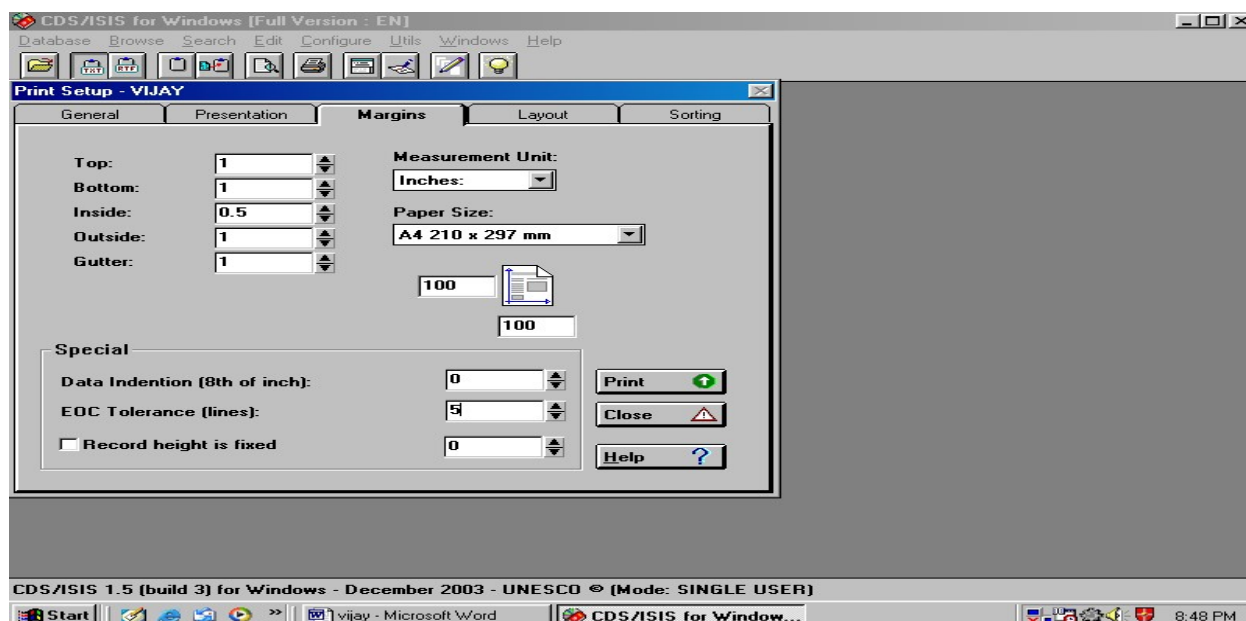


Fig. No. 4.9 B Margins setting for Print Format

The above figure is the part of previous figure (4.9 a), it the setup of page margins or page setup to take the print outs on paper in appropriate manner. The researcher has selected measurement in Inches Unit, the top and bottom is 1” Outside and Gutter is 1” and inside has selected 0.5 inches of text. The paper size is A4 (210 x 297) and EOC Tolerance is 5 (line spacing) in single space for print the entries on every page in similarly.

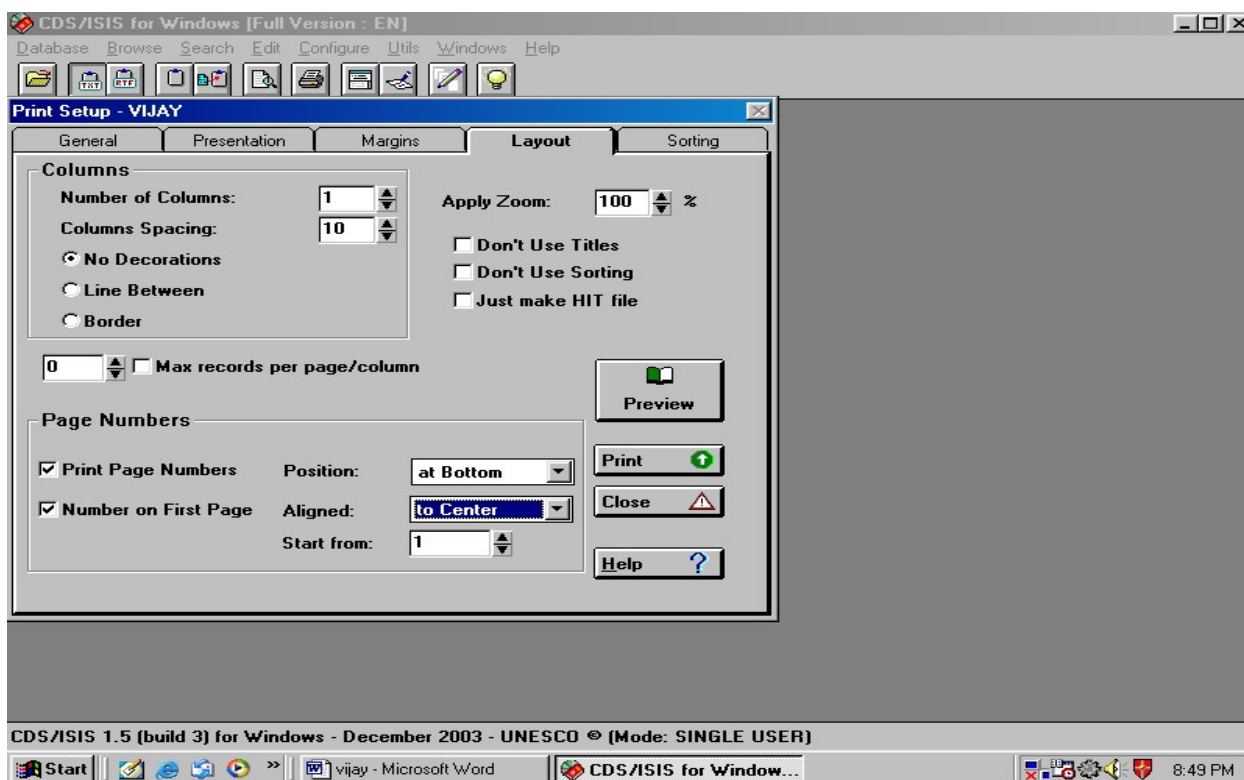


Fig. No. 4.9 C Layout setting for Print Format

This figure shows the complete layout of the page which has to print on paper in proper setting up, the researcher has selected the single column, column spacing is 10, the zoom is 100%, page numbers position has selected at bottom and the number aligned to center and these page numbers starts from no. 1.

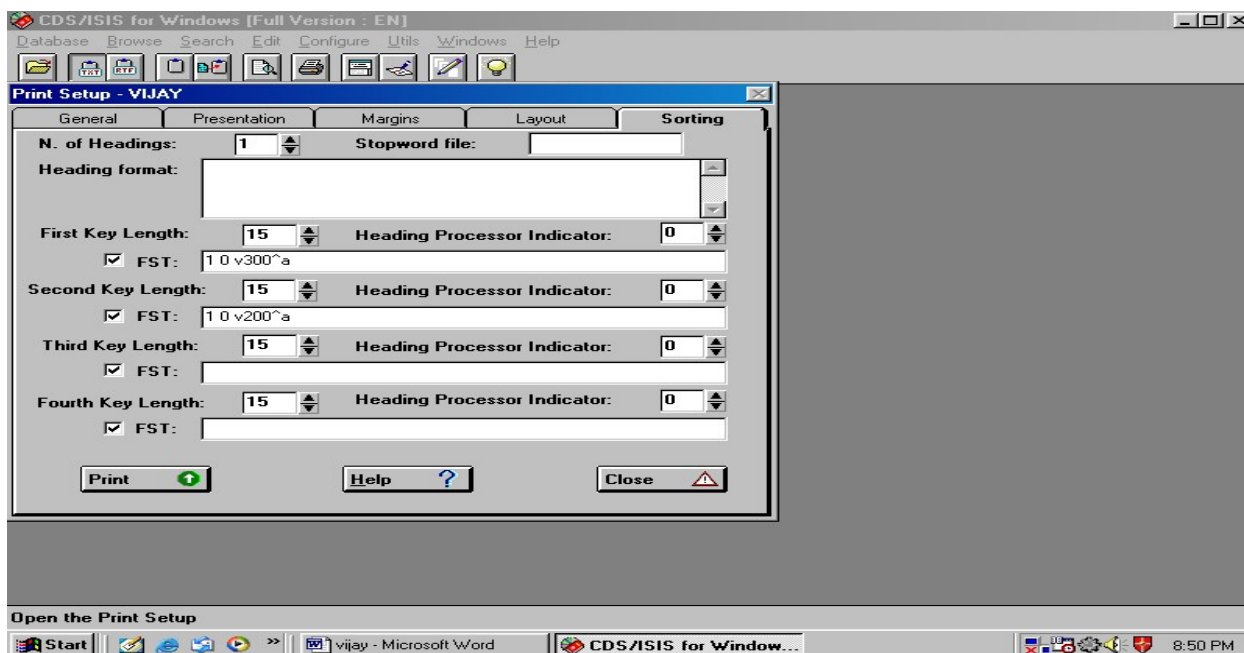


Fig. No. 4.9 D Sorting Setting for Print Format

This last setup window of CDS/ISIS to print the job appropriately. ‘Sorting’ the main presentation of the print out on paper the above window prints the job as per the selection of researcher’s activity. The researcher has selected the First, Second and Third key length is 15 characters, which sort on ‘Title’, and ‘Author’.

In the above database there are 674 entries of Ph.D. thesis awarded by Sant Gadge Baba Amravati University, Amravati. It is not possible to present all these entries in hard copies with the Dissertation copy. So, the researcher has tried to give an sample of the with complete print setup of database in Annexure Section of Dissertation and also the researcher has provided a soft copy of the above database with Dissertation.

Chapter-5

Analysis and Interpretation of Data

The term analysis refers to a closely-related operations that are performed with the purpose of summarizing the collected data and organizing in such a manner as to yield answer to the question. It means studying the tabulated material in order to determine inherent facts or meaning.

Data analysis is a process facilitating the data for the operations designed to draw conclusions or test hypothesis.

This chapter is devoted to analyzed and interoperate the collected data and the inferences drawn according to the objectives of the study.

This process was completed by operating the search technique i.e. Guided Search and Expert Search which facilitated in CDS/ISIS for windows (WINISIS)

Faculty wise Distribution of Ph.D's

Sr. No.	Name of Faculty	Total No. of Ph.D's	Percentage
1	Arts	383	26.70
2	Ayurvedic Medicine	11	0.76
3	Commerce	115	8.01
4	Education	171	11.92
5	Engineering & Technology	84	5.85
6	Home Science	37	2.60
7	Law	09	0.62
8	Medicine	12	0.83
9	Science	447	31.17
10	Social Science	165	11.50
	Total	1434	100.00

Table 1 Faculty wise Distribution of Ph.D.'s

Table No. 1 reveals that the total 1434 Ph.D's were produced since 1983 the establishment year of S.G.B. Amravati University, Amravati to the year 2011 in ten faculties. Such as Arts 383 (26.70%), Ayurvedic Medicine 11 (0.76%), Commerce 115(8.01), Education 171 (11.92%), Engineering & Technology 84(5.85%), Home Science 37 (2.60%),Law 09 (0.62),Medicine 12 (0.83),Science 447 (31.17) Social Science 165 (11.50%)

The percentage of awarded Ph.D's in Arts is 26.70% and Science Faculties is 31.17% which is greater than other faculties such as Ayurvedic Medicine 0.76%, Commerce 8.01%, Education 11.92%, Home Science 2.60%, Law 0.62%, Medicine 0.83% and Social Science 11.50%.

Subject wise Distribution of Ph.D's in Each Faculty

Faculty Name : Arts

Sr. No.	Subject Name	Total No. of Ph.D's	Percentage
1	English	80	21.00
2	Hindi	47	12.27
3	Marathi	159	42.00
4	Music	20	5.22
5	Pali and Prakrit	00	0.00
6	Persian & Arabic	05	1.30
7	Sanskrit	07	2.00
8	Urdu	65	17.00
	Total	383	100.00

Table 2 Subject wise Distribution of Ph.D.'s in faculty of Arts

Table No. 2 brings out the fact that largest part of research output has been in the subject Marathi with the 42% out of 383 Ph.D. in Arts faculty 159 were awarded in Marathi then, English 80 (21%), Urdu 65 (17%) Hindi 47 (12.27%), Music 20 (5.22%), Sanskrit 07 (2%) and Persian 05 (1.30%) not a single Ph.D. was produced in Pali and Prakrit.

Faculty Name: Ayurvedic Medicine

Sr. No.	Subject Name	Total No. of Ph.D's	Percentage
1	Shaillyatantra	1	9.09
2	Kayachikitsa	8	72.72
3	Rasashatra	1	9.09
4	Sharir Rachana	1	9.09
	Total	11	100.00

Table 3 Subject wise Distribution of Ph.D.'s in faculty of Ayurvedic Medicine

It is obvious from Table No. 3 that subjects were Shailaytantra, Kayachikitsa Rasashatra and Sharir Rachana in Ayurvedic Medicine faculty were awarded equal no. of Ph.D's (1) with the same percentage (33.33%) in Shailaytantra, Rasashatra and Sharir Rachana, 8 Ph.D's were produced in Kayachikitsa with 24.34%

Faculty Name: Commerce

Sr. No.	Subject Name	Total No. of Ph.D's	Percentage
1	Accounts and Statistics	03	3.00
2	Business Administration	04	3.47
3	Business Economics	28	24.34
4	Business Management	60	52.17
5	Commerce	20	17.39
	Total	115	100.00

Table 4 Subject wise Distribution of Ph.D.'s in Faculty of Commerce

Table No. 4 reflects that there are 5 subjects in which Ph.D. were produced in the faculty of Commerce i.e. Accounts and Statistics 03 (3%), Business Administration 04 (3.47%), Business Economics 28 (24.34%), Business Management 60 (52.17%) and Commerce 20 (17.39%).

Faculty Name: Education

Sr. No.	Subject Name	Total No. of Ph.D.'s	Percentage
1	Education	119	69.59
2	Physical Education	52	30.41
	Total	171	100.00

Table 5 Subject wise Distribution of Ph.D.'s in Faculty of Education

Table No. 5 brings into focus that in Education Faculty two subjects are included i.e. Education 119(69.59%) and Physical Education 52 (30.41%).

Faculty Name: Engineering and Technology

Sr. No.	Subject Name	Total No. of Ph.D's	Percentage
1	Chemical Technology	05	6.00
2	Civil Engineering	09	20.68
3	Electrical Engineering	07	11.00
4	Electronics Engineering	29	35.00
5	Industrial Electronics	00	0.00
6	Applied Electronics	00	0.00
7	Computer Science and Engineering	12	14.28
8	Mechanical Engineering	14	17.00
9	Production Engineering	08	10.00
10	Architecture	00	0.00
11	Textile Technology	00	0.00
	Total	84	100.00

Table 6 Subject wise Distribution of Ph.D.'s in Faculty of Engineering & Technology

Table No. 6 clearly shows that in the faculty of Engineering and Technology there are total 11 branches in which Ph.D. were awarded i.e. Chemical Technology 05(6%), Civil Engineering 09 (20.68%), Electrical Engineering 07 (11%), Electronics Engineering 29 (35%), Applied Electronics 00, Computer Science and Engineering 12 (14.28%), Mechanical Engineering 14 (17%), Production Engineering 08 (10.00%) and Industrial Electronics, Applied Electronics, Textile

Technology and Architecture in which no one has submitted Ph.D. to S.G.B. Amravati University, Amravati.

Faculty Name: Home Science

Sr. No.	Subject Name	Total No. of Ph.D's	Percentage
1	Food Science and Nutrition	12	32.43
2	Home Science Extension	10	27.02
3	Textile and clothing	09	24.32
4	Home Management	01	3.00
5	Human Development	02	5.40
6	Family Resource Management (F.R.M.)	03	8.10
	Total	37	100.00

Table 7 Subject wise Distribution of Ph.D.'s in Faculty of Home Science

From the Table No. 7 it is evident that in the faculty of Home Science the Ph.D.'s have been mostly submitted in the subject of Food and Nutrition 12 (32.43%), while in other subjects the percentage is less which is as follows: Home Science Extension 10 (27.02%), Textile and Clothing 09 (24.32%), Home Management 1 (3%), Human Development 02 (5.40%), Family Resource Management 03(8.10%).

Faculty Name: Law

Sr. No.	Subject Name	No. of Ph.D's	Percentage
1	Law	09	100.00
	Total	09	100.00

Table 8 Subject wise Distribution of Ph.D.'s in Faculty of Law

The Table No. 8 makes it clear that there is only one subject in the faculty of Law with same name and were only 09 Ph.D's were awarded and the percentage is 100.00%.

Faculty Name: Medicine

Sr. No.	Subject Name	No. of Ph.D's	Percentage
1	Pharmaceutical Science	12	100.00
2	Modern Medicine	00	0.00
3	Preclinical	00	0.00
4	Modern Medicine Surgery	00	0.00
5	Modern Medicine	00	0.00
6	Clinical I	00	0.00
7	Clinical II	00	0.00
8	Paraclinical	00	0.00
9	Dentistry	00	0.00
10	Pre-Clinical	00	0.00
11	Dentistry Clinical	00	0.00
12	Homeopathy	00	0.00
	Total	12	100.00

Table 9 Subject wise Distribution of Ph.D.'s in Faculty of Medicine

The Table No. 9 through light on the fact that there is 12 subjects included in faculty of Medicine but out of 12 subjects only in Pharmaceutical Science 01 Ph.D. was awarded so the percentage is 100.00%.

Faculty Name: Science

Sr. No.	Subject Name	No. of Ph.D's	Percentage
1	Bio-Chemistry	03	0.67
2	Bio-technology	21	4.7
3	Botany	60	13.42
4	Chemistry	129	29.00
5	Computer Science	04	0.89
6	Electronics	06	1.34
7	Exploration, Geo-chemistry and Hydrology	00	0.00
8	Geology (including applied Geology	13	3.00
9	Mathematics	25	6.00
10	Micro-Biology	28	6.26
11	Physics	58	13.00
12	Statistics	11	2.46
13	Zoology	86	19.23
14	Environmental Science	03	0.67
	Total	447	100.00

Table 10 Subject wise Distribution of Ph.D.'s in Faculty of Science

The Table No. 10 sets forth the fact that in the subject of Chemistry, large number of research out was found. It is 129 i.e. (29%). In other subjects, it goes follows: Bio-chemistry 03 (0.67%), Bio-technology 21 (4.7%), Botany 60 (13.42%), Geology 13(3%), Mathematics 25 (03.44%), Micro-biology 28 (6.26%), Physics 58 (13.00%), Statistics 11 (2.46%), Zoology 86 (19.23%) and Environmental Science 03(0.67). In the Computer Science (04) (0.89),

Electronics06(1.34) and Exploration (Geo-chemistry and Hydrology) there were no Ph.D. has been submitted.

Faculty Name: Social Science

Sr. No.	Subject Name	No. of Ph.D's	Percentage
1	Economics	25	15.15
2	Geography	20	12.12
3	History	28	17.00
4	Home Economics	20	12.12
5	Library and Information Science	11	7.00
6	Political Science	32	19.39
7	Sociology	17	10.30
8	Social work	2	1.21
9	Psychology	8	5.00
10	Rural Services	00	0.00
11	Philosophy	1	0.60
12	Mass Communication	1	0.60
	Total	165	100.00

Table 11 Subject wise Distribution of Ph.D.'s in Faculty of Social Science

The Table No. 11 gives out the fact that the growth of research in Social Science faculty is less as compare to Science and Arts faculty. The research ouput of the subject pertaining to Social Science faculty is as follows: Economics 25(15.15%), Geography 20 (12.12%), History 28 (17%), Home Economics 20(12.12%), Library and Information Science 11 (7.00%), Political Science 32 (19.39%), Sociology 17 (10.30%), Social Work 02 (1.21%), Psychology 08 (5%),

Philosophy 1 (0.60), Mass Communication 1 (0.60) and) there were no Ph.D. has been submitted in Rural.

Year wise Distribution of Ph.D.'s in various faculties of Sant Gadge Baba Amravati University, Amravati.

Year	Arts	Ayurvedic Medicine	Commerce	Education	Engineering & Technology	Home Science	Law	Medicine	Science	Social Science	Percentage
1983- 1985	00	--	--	--	--	--	--	--	--	--	--
1986	01	--	--	--	--	--	--	--	--	--	0.75
1987	03	--	01	--	--	--	--	--	04	--	0.55
1988	03	--	--	--	--	--	--	--	--	--	0.20
1989	05	--	03	--	--	--	--	--	06	01	1.04
1990	04	--	--	--	--	--	--	--	03	--	0.48
1991	04	--	02	02	--	01	--	--	03	--	0.83
1992	10	--	04	01	--	02	--	--	06	--	1.60
1993	04	--	04	02	01	--	--	--	09	03	1.60
1994	04	--	05	02	--	02	--	--	02	01	1.11
1995	10	--	--	02	03	--	--	--	02	--	1.18

1996	08	--	01	01	--	--	--	--	03	02	1.04
1997	13	--	--	03	--	02	--	--	01	04	1.60
1998	06	--	01	03	01	02	--	--	10	--	1.60
1999	09	--	04	05	01	04	--	--	14	04	2.85
2000	11	1	10	05	02	01	--	--	07	04	2.85
2001	12	1	03	04	--	--	--	--	41	02	4.39
2002	24	1	07	10	05	02	--	--	24	08	5.64
2003	25	--	07	09	03	02	--	--	14	07	4.67
2004	29	--	14	06	04	02	01	01	22	12	6.34
2005	20	--	06	08	07	--	01	--	24	15	5.64
2006	04	--	--	06	02	01	--	--	08	02	1.60
2007	36	03	12	20	10	03	--	01	48	18	10.52
2008	33	01	08	18	07	03	01	--	42	16	8.99
2009	48	01	10	23	12	05	04	04	42	23	11.99
2010	27	02	08	14	16	03	01	01	50	15	09.55
2011	30	01	05	27	10	02	01	04	62	28	11.85
Total	383	11	115	171	84	37	09	12	447	165	100.00

Table 12 Year wise Distribution of Ph.D.'s in various faculties

The Table No. 12 brings into limelight the growth of Ph.D. level research in Sant Gadge Baba Amravati University, Amaravati. It is evident from the table that research in all 10 faculties was very low till 1998. Only 186 Ph.D. degree were awarded in 15 years then research activities maintained a regular increasing rhythm till 2011 except for a brief set back in the year 2006. A great spurt was noticed in 2009 when as many as 172 degrees, were awarded, the highest in a year so far.

Chapter-6

Findings, Conclusions and Recommendations

The researcher has been working on the topic “A Design of Bibliographic Database of Ph.D. Thesis awarded by Sant Gadge Baba Amravati University, Amravati. Since 1983-2011: By using WINISIS”. The creation of database is one of the important techniques to control over the information of Ph.D. thesis. So in the present study research has been made an attempt to prepare bibliographic database of Ph.D. thesis awarded by Sant Gadge Baba Amravati University, Amravati.

From the above study it is revealed that,

1. The proposed design of the bibliographic database will enable for performing a number of information retrieval activities.
2. The proposed design is expected to avoid the duplication of researcher work.
3. The Library software CDS/ISIS for windows facilitate distinctive features as a result of the windows operating system. Microsoft Windows is described as a graphical user environment, which gives user more control over the work.
4. CDS/ISIS for windows allows running more user one program at time. Thus is allows user to have more than one CDS/ISIS database open.
5. The software has facility to transfer data or images from one to another.

6. The software has facilitate function of mouse to move windows around the screen and to activate or de-activate window there are drop down menus, also activated by mouse.
7. The software has facility of number of drop down menus are accessible from the bar at the top of each window. They are accessed by single click of mouse.
8. The development of CDS/ISIS software package by UNESCO has given quantum jump in computerization of Library and Information activities because it has facility of entered the data of various information sources and retrieved the information an various aspects.
9. CDS/ISIS for windows as easy to use menu driven options and capability to develop complex databases without much programming knowledge.
10. It has facility to define default values to various fields in the data entry worksheet and also the facility of generation of Index.
11. The powerful print set up, print, display format and search options of CDS/ISIS for windows making its use widespread.
12. Besides its CDS/ISIS for windows is available on free of cost by using effective searching options.

By using effective searching options of CDS/ISIS for windows following findings and conclusions was drawn.

1. The use of WINISIS supports to carry out bibliometric analysis of the database of Ph.D. thesis.

2. The database created by the researcher through WINISIS should be made available online through out the world with the help of web site.
3. A Bibliographic database of Ph.D. thesis awarded by Sant Gadge Baba Amravati University, Amravati contains 1434 records including 10 faculties.
4. In the faculty of Arts and Science research activities maintained a regular rhythm as compared to other faculties more Ph.D. degrees have been awarded by Sant Gadge Baba Amravati University, Amravati.
5. It can be concluded that there is a need of research work in the subjects running under the faculties of Home Sciences, Medicine, Law and Ayurvedic Medicine and Engineering & Technology.
6. In the beginning years of the Sant Gadge Baba Amravati University, Amravati the growth of research was very low. In the middle years the rate of growth of research work was quite increased. But in the last decade the rate of growth of research work has been increasing consistently. A great spurt was noticed in the year 2009 when as many as 172 degrees were awarded the highest in a year so far.
7. The conclusion is that there is highest number of eminent personality, which has been working as guide in the subject of Marathi followed by Chemistry, Botany, Education, Zoology and English from various faculties.

Recommendations:

The researcher has conducted the study of “A Designed of Bibliographic Database of Ph.D. Thesis awarded by Sant Gadge Baba Amravati University, Amravati: Since 1983-2011: By using WINISIS”. Therefore the researcher has following recommendations.

1. The database develop by the researcher is a unique one and such databases should be created at university and national level by using WINISIS to avoid the duplication of research work.
2. Every librarian should pay attention towards the use of CDS/ISIS for windows in routine work because it is available in free of cost.
3. Taking into consideration importance of Ph.D. thesis in the generation of knowledge in the different field of activities it is suggested that there should device such a mechanism to increase the rate of growth of research activities.

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