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BLS PROGRAMME
Course 7 : Computer Basics and Applications
Practical Exposure Programme

HAND-OUT 3

(Condensed User Manual)

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Introduction

The course material relating to course 7: Computer Basics and Applications contains a brief writeup on CDS/ISIS package. This condensed version of user manual relates to version 2.3 of the CDS/ISIS package. This is meant to provide desk assistance to the beginners, who may like to install the package themselves and gain some operational exposure to the software package. It contains only the bare essentials that are needed by the beginners. For complete details they required to refer the full manual. This instructional version has been prepared by Shri Sukhdev Singh, Central Library, IGNOU as an aid to handle this package.

(R SATYANARAYANA)

Chapter I : Features of CDS/ISIS

A) General Features of CDS/ISIS

CDS/ISIS is a Database Management System (DBMS). It is a software package which can be used as a generalized tool for handling databases. It is menu-driven and relieves the user from the in-depth knowledge of programming and programming language. It is best suited for **non-numerical** structured databases.

With CDS/ISIS databases, can be created and manipulated in various ways. The following operations are possible:

— Creation of new databases
— Modification of existing databases
— Entering of new records
— Modification, correction and deletion of records
— Building and maintaining of fast access files
— Retrieval of records
— Sorting of records
— Displaying of records
— Printing of sorted reports, catalogues and indexes
— etc., etc.

B) Advanced Features of CDS/ISIS version 2.3

1) Single Main Menu

Access to all services of CDS/ISIS is through a single **main menu,** user does not have to run different programs for different functions.

2) Jump Keys

Function keys are programmed to jump from one service menu to another service menu.

S.No.	Service Menu	Direct access Function Key
1		F2
2		F3
3		F4
4		F5

3) Status Display

When a database is selected each menu displays the following status, in two bottom lines on the screen.

Database Name	Current Worksheet
Maximum MFN	Current Format

4) Location of system & database file

System and database files can reside in different directories or in different drives. Path to all such directories or drives can be given through SYSPAR.PAR text file which should be present in the directory from where the CDS/ISIS is called.

5) Extraction of data from related record

The formatting language provides command to extract data from a related record. In other words, data from different records in the database can be extracted and displayed/printed as single set of data. It is also applicable to that of specifying sorting keys, selection of inverted file terms and contents of exported or imported records (REF and L functions).

6) Conditional formatting

The formatting language provides for a record to be formatted differently depending upon some conditions— usually the presence or absence of certain data in the record fields. (IF THEN ELSE Statement).

7) Free Text Search

Apart from searching the database through inverted file. CDS/ISIS ver. 2.3 also provides free text search facility. This enables the searching of any field whether it is indexed or not. Boolean expressions and other operators can be used for searching. Moreover inverted file-based searches and free text searches can be combined together.

8) Sorting

The sorting sequences can be customized to suit the requirements of a particular national language by extending the ISISUC. TAB table.

9) PASCAL Interface

Application programmes can be written in inbuilt CDS/ISIS PASCAL language. These programmes can be called from menus or through Advanced PASCAL services of the Main Menu.

10) Programmable Function Keys

Function keys may be pre-programmed to execute complex functions (such as, printouts) by a single key stroke.

11) System Limitations

Maximum number of databases	unlimited
Maximum number of records in a database	16 million (500 Mb)
Maximum record size	8000 Charac.
Maximum number of fields in FDT	200
Maximum number of lines in a FST	200
Maximum size of a field	8000 Charac.
Maximum number of fields in a worksheet page	19
Maximum number of pages in a worksheet	20
Maximum size of a display format specification	4000 Charac.
Maximum number of words in a stopword file	799

Chapter II : Installing and Calling CDS/ISIS

1) Installation

CDS/ISIS Ver. 2.3 provides two types of Installation:

a) All system and data files on a single directory

Here all the system files and data files are on a single directory. Such installation is quite simple and recommended for the beginners who do not have adequate knowledge of DOS directory structure and directory path commands. The following are the different steps involved in the process.

Steps:

* MD\ISIS <Return>
* CD\ISIS <Return>

* Insert CDS\ISIS disk 01 in drive a:
* COPY a: * . * <Return>
* Inser: CDS\ISIS system disk 02 in drive a:
* COPY a:*.* <Return>
* Insert CDS\ISIS sample disk to drive a:
* COPY a: * * <Return>

b) Different system files and data files on different subdirectories

Here different system files and data files are placed on different subdirectories (or even drives). It is complex form of installation. It is recommended for those who have adequate knowledge of DOS directory structure and path command. Here the path to ISIS. EXE is given through path command of DOS. The AUTOEXEC.BAT file is modified for this purpose. Path for other system files and database files are give by a CDS/ISIS text file SYSPAR.PAR which must present on the directory from where CDS/ISIS is called. The operational steps required in this case are indicated below.

Steps

i) Installation:

* MD/ISIS<Return>
* CD/ISIS<Return>
* MD SYS<Return>
* MD PROG<Return>

* MD MENU<Return>
* MD DATA<Return>
* MD MSG<Return>
* Place system disk 01 in drive a:
* COPY a: Install.bat C:\ISIS<Return>
* INSTALL \ISIS\ SYS \ISIS\MENU \ISIS\MSG \ISIS\DATA \ISIS\PROG<Return>
* Follow the instructions displayed on the screen.

ii) Establish path to ISIS Program:

Place the following command in your AUTOEXEC.BAT File
PATH = C: \ISIS\SYS

iii) Create SYSPAR.PAR File:

To execute CDS/ISIS; the ISIS directory must contain SYSPAR.PAR. Use EDLIN and create SYSPAR.PAR file of following five lines:

1 = \ISIS\PPOG\
2 = \ISIS\MENU\
3 = \ISIS\MSG\
4 = \ISIS\
5 = \ISIS\DATA\

2) Calling CDS/ISIS

* Boot your system from hard disk.
* CD\ISIS <Return>
* ISIS <Return>

After few seconds the Main Menu of CDS/ISIS will be displayed on the screen.

Note: The instructor (Resource person) is expected to demonstrate both the procedures relating to installation with full explanation. The student may be asked to follow the first method for his exercise.

Chapter III : Components of CDS/ISIS Database

The structure of CDS/ISIS can be viewed from two angles.

I) The Physical Structure

The CDS/ISIS consists of a number of physically distinct computer 'es. However a user need not know the physical structure of the data base

II) The Logical Structure

Logically the CDS/ISIS consists of four components:

1) Field Definition Table (FDT)
This is the definition part of the database. By this, the various fields, subfields, type of the fields, length of fields etc., of a particular database is made known to CDS/ISIS. There can be only one FDT. It requires complete detail of each field of the database.

The following information is required for each field to be defined in FDT.

i) Field Tag
It is the UNIQUE numeric value by which the field is known to the CDS/ISIS. The range is 1 to 32761. However, field tag upto a maximum of three digits should be preferred.

ii) Field Name
It is the descriptive name assigned to the field. It can be upto 30 characters long.

iii) Field Length
It indicates the maximum length for a field (or for each occurrence in case repeatable field). It can be in the range of 1 to 1650.

iv) Field Type
It tells the CDS/ISIS what type of data will the field accept.

There are of four types:

X: Alphanumeric (can contain any character)
A: Alphabetic (can contain, alphabets)
N: Numeric (can contain only numbers)
P: Pattern (can contian only those characters that are defined by the pattern)

v) Repeatability
It tells whether the field can have more than one value. The repeatable field is indicated by "R". All types of fields can be repeatable except the pattern type.

vi) Subfields

This tells CDS/ISIS whether a field has subfield. If subfields are present in a field, then subfield delimiters indicating the various subfields are given.

The subfield delimiters are single character codes (e.g. A to Z and 0 to 9)

vii) Pattern
Pattern is a character by character description of the contents of the field.

The types of character may be:

X: Alphanumeric
A: Alphabetic
9: Numeric

<other>: Any pre-determined character.

2) Worksheet for Data Entry
Data is entered in the records of database through electronic proforma. This electronic proforma is called worksheet for Data Entry. It is the medium of data input for the database. A CDS/ISIS database can have unlike FDT more than one data entry worksheet. The worksheet that is created at the time of database creation is the default worksheet of the database.

3) Format
It is the Format for displaying or printing of the contents of the records of the database in a predefined layout. There can be many such formats for a particular CDS/ISIS database. Each for a different set of fields and layout. The format that is defined at the time of database creation is the default display format for that database. A format is basically a set of instructions specifying which set of fields of the record must be displayed, and in which order and layout. It is thus a medium of data output from the database.

The instructions contained in a format are in the formatting language of CDS/ISIS. This Formatting Language is used for many purposes in CDS/ISIS apart from Display/Print Formats. It is therefore recommended that one should learn the formatting language in order get maximum out of CDS/ISIS.

Here some of the core parameters of the CDS/ISIS formatting language are being introduced. For a detailed study, refer to the CDS/ISIS Reference Manual published by UNESCO.

i) Field Select Parameters
These are used to select and display specific field or portion thereof.

The General Formula for Field Select parameters is as follows. All the parameters may or may not be used.

v ttt ^d (f,C)

v = Indicates the beginning of tag no.

where

ttt = Number indicating the tag of the field. It has a numeric value e.g. 200

^ = Indicates the beginning of subfield delimiter.

d = Subfield delimiter indicating that the contents of the specified subfield is to be printed. It is a single character e.g. A, B, C, 1, 2, etc.

(= Indicates the beginning of position parameters

f = Indicates the position from the left margin from where the contents of the field will start displaying, provided that it is the first field to be formatted in the current line.

, = Comma is a separator between f & C

C = Indicates the same as "f", but is applicable for the SECOND and subsequent lines of the field contents if any.

If both f & C are omitted they are assumed to be zero. However, if any one of the two is specified, the other must also be specified.

ii) Master File No.

Master File no. or the record no. can specified in a format as follows:

MFN (d)

where MFN = indicates the Record No.

d) = d within bracket indicates the number of digits in which the MFN is to be displayed. If it is omitted, 6 digit MFN will be displayed by default.

iii) Horizontal and Vertical Spacing Parameters

S.No.	Symbol	Command
	Xn	Insert n spaces before formatting next field on the current line
2.	Cn	Specifies that the following field contents must be formatted starting for nth position from the left margin
	/	Space to new line provided that the current line is non-blank
4.	#	Space to new line even if the current line is blank
5.	%	Delete previously formatted blank line(s), if any

iv) Repeatable Group

A repeatable group consist of a set of parameters enclosed within ( ). The meaning of the parameters remains the same except that the occurrences of the repeatable fields are now displayed in sequence as given in the repeatable group specification. In other words, the first occurrence of all the field will be displayed in first sequence, then second occurrence and then third and so on. If the repeatable group specification is not given then all the occurrences of a field will be displayed first, then all occurrences of the next field and so on.

v) Literals

A constant or literal specification consists of a string of characters enclosed between approximate delimiters. The various types of literal specification and their effect is given as follows:

S. No.	Literal type	Delimiters	Effect
1.	Unconditional	' '	String is always displayed
2.	Conditional	" "	String is displayed only if associated field is present
	Repeatable	| |	String is displayed with all occurrences of a repeatable field. String also obeys the spacing and position parameters associated with the field.
4.	Pre-repeatable	| | +	String is displayed **before** all **but the First** occurrence of the associated field
5	Post-repeatable	+	String is displayed **after** all **but the Last** occurrence of the associated field

vi) Display Mode

It indicates how the data will be displayed.

General Formula for display mode is M*mt*

Where M indicates that it is mode specification

m = Indicates the type of mode

t = Indicates Lower or Upper case

m can have three values

P = Proof Mode : displays data along with coded instructions like delimiters and filing information

H = Header Mode : Displays data only. The coded instruction are either ignored or changed into punctuation marks

D = Data Mode : Same as Header mode but the contents of each field is suffixed with a full stop (.) followed by two spaces.

t can have two values

L = data remain as entered

U = data convert to upper case

Thus the possible combinations are:

	P	H	D
L	MPL	MHL	MDL
U	MPU		

4) Field Select Table

There can be more than one Field Select Table or FST for a CDS/ISIS. There are used for various purposes. However, the FST which is created at the time of database creation is used for generation and maintaining of inverted file. Inverted file is an index to the contents of the database. An FST consists of number of lines. Each line consists of 3 components:

a) Field Identifier (ID)

b) Indexing Technique (IT)

c) Format

Each line thus can represented as:

ID	IT	FORMAT
For example:		
70	Q	MHU, (V70/)

Format
It is in the formatting language of CDS/ISIS. This results in outputting contents of field specified in the Format.

Indexing Technique
It is applied to the output of the Format. There are five indexing techniques available in CDS/ISIS.

0 Builds an element from each line outputted by format.

1 Builds an element from each subfield and/or line outputted by format

2 Builds an element from term or phrase enclosed in triangular < > brackets

3 Same as 2, but terms are enclosed in slashes / / instead of triangular < > brackets

4 Builds an element from each word in the text outputted by format.

** In Format, Header mode should be used for IT 0 or 4 while Proof mode should be used for IT 1, 2 or 3.

Field Identifier
The application of indexing technique to the Format generates elements. The Field Identifier is assigned to each of such elements. These Field Identifiers can be used as qualifier during searching of the database.

Chapter IV : Calling CDS/ISIS and Selecting an Option

I) Calling

To call the CDS/ISIS programme you will have to type these:

* CD\ISIS <Return>
* ISIS <Return>

The Main Menu of CDS/ISIS will be displayed on the screen as follows:

L — Change dialogue
C — Change database
E — ISISENT — Data Entry Services
S — ISISRET — Information Retrieval Services
P — ISISPRT — Sorting & Printing Services
I — ISISINV — Inverted File Services
D — ISISDEF — Database Definition Services
M — ISISXCH — Master File Services
U — ISISULT — System Utility Services
A — ISISPAS — Advanced Programming Services
X — Exit

II) Selecting an Option

An option is selected by simply pressing a single key/letter corresponding to the desired option. Don't press <Return> after the letter.

III) Replying to a Prompt

Whenever CDS/ISIS requires additional information it prompts you. There are three types of prompts.

a) **Submenus:** These are like menus, but appear in the message area of the screen leaving the data area

untouched. It provides a number of options like a menu. An option from the submenus can be selected by pressing the corresponding key. Pressing of <Return> is not required.
b) **Line Prompts:** These are normally used to request a single item of information such as a database name. Respond by typing the required information and terminate by <Return>
c) **Edit Prompts:** As line prompt, these are used to request a single item of information. However, because responses to edit prompts may be longer than those to line prompts, CDS/ISIS activates the field editor.

Chapter V : Creation and Modification of Data Base

Data Base Definition Services (ISISDEF) provides for creating a new database or modifying an existing database

A) Creation of New Database
Let us create a very simple database for holdings of a library. Say we decide to have following four fields in our database record.

1) Author
2) Tittle
3) Imprint
4) Subject heading(s).

CDS/ISIS requires that while creating a new database, FDT, Default worksheet, Default Format and FST are created in a single session, one after the other. For this purpose, you will have to:

* Call option D from the Main Menu

* A Submenu is displayed with the following options:

L — Change dialogue language
C — Define a New database
U — Modify database definition
I — Re-Initialize Master File
X — Exit

* Select option C

* CDS/ISIS prompts for the name of database. The name of the database should not exceed **six characters.** Respond by entering LIB <Enter>.

* CDS/ISIS now prompts you to create all the Four essential components of the database; one after other.

1) Field Definition Table
As soon as the name of the database is accepted by CDS/ISIS. It presents a table to be filled in by you. Information about each field to be designed is to be given on a separate line. The following information is required for each field.

Tag	Field Name	Length	Type	Repeatability	Subfield/pattern

Respond by Entering following key stocks — <Enter>

10 <Enter> Author <Enter> 100 <Enter> x R <Enter>
20 <Enter> Title <Enter>200 <Enter> x <Enter> <Enter>
30 <Enter> Imprint <Enter> 100 <Enter> x <Enter> ABC <Enter>
40 <Enter> Subject Heading(s) <Enter> 150 <Enter> x R <Enter>
<Enter>
<Enter>

Your FDT is complete

2) Worksheet

As soon as your FDT is completed, you will be prompted to create the default worksheet. The prompt is:

Enter Field Tag?

A series of various prompts is displayed for each field you want to define in the worksheet. Following are the keystock responses for the series of prompts for each field of our database "LIB"

Prompts	I field	II field	III field	IV field
L/C position of field	3/5	6/5	9/5	12/5
(Name of field is displayed on the screen. You may make changes if you like)				
L/C position of field value	<Enter>	<Enter>	<Enter>	<Enter>
Screen Attribute	<Enter>	<Enter>	<Enter>	<Enter>
				S2
	Separate each author by % mark	<Enter>	^A place ^B Pub. ^C Date	Separate each sub-heading by % Mark
Enter default	<Enter>	<Enter>	^A <Enter>	Enter

Exit the worksheet creation mode by responding with <Enter> to the prompt "Enter Field Tag".

Once you are out of the worksheet creation mode, you are provided with following options.

Options	Action
<CR>NEXT PAGE	Create a new page if the worksheet is not complete
B– PREVIOUS PAGE	Review/edit the previous page if any
R– RESTORE SCREEN	Redisplay the current page of the worksheet
E– EDIT	You can modify your worksheet
S– EXIT & SAVE	Done
C– CANCEL	Exit without saving

* Save and Exit by pressing S. However, if you feel that something is missing or some changes are to be made then press E.

If you press E, then following options are provided to you:

M — Modify
R — Right
S — Shift
D — Delete
C — Centre
A — Add Field
<TAB>— Previous
<CR> — Next
X — Exit

Use appropriate options to make desired changes. Then save and exit by pressing S.

3) Format

As soon as you save and exit from worksheet, you are provided with a blank screen. Here you can type the various parameters of your default display Format. Completion of display format is indicated by pressing <Enter>

* Enter following keystrokes for our Display format "LIB".

  'Record No.' MFN(3)/MDL, V10+|; |"."/V20 (10,5)/V30^A,
  V30^B, V30^C/'KEYWORD (S):'/(V40)/##<Enter>

4) FST for Inverted File

As soon as you press <Enter> after entering keystrokes for display format, you are provided with a three column table. This is for defining FST for Inverted file of the data base. Before you create an FST, You must decide which fields and what content thereof you want to make searchable.

Let us create FST for our database "LIB".

Enter the following key stocks

ID	IT	FORMAT
10 <Enter>	0	MHL, (V10/)<Enter>
20 <Enter>	4	MHL, V20<Enter>
40 <Enter>	0	MHL, (V40/)<Enter>
<Enter>		

Save and Exit the FST by pressing <Enter>.

* Now you have defined all the four components of your Database.
* Return to main Menu by pressing **function key F2.**

Press X to exit CDS/ISIS

B) MODIFYING A DATABASE

Modyfying a database is a simpler affair as compared to Database creation. Here you can select any of the four components (FDT, Worksheet, Format, FST) of a database and can Modify, copy or delete them. (FDT and default components can't be and should not be deleted).
Modification of any component of the detabase is quite similar to the process of defining or creating them. The steps involved are:

*Run CDS/ISIS by entering ISIS at the DOS Prompt.
*You will see the main Menu of the CDS/ISIS
*Select option D
*You will see the familiar ISISDEF Menu
*Select option U
*You will be prompted to enter database name
*Respond by LIB<Enter>
*You will see the following Menu (EXDBU)

Service ISISDEF Data Base Definition Services Menu EXDBU

A — Update Field Definition Table
B — Create/Update Worksheet
C — Copy Worksheet Description
D — Delete Worksheet Description
E — Create/Update FST
F — Copy field Select Table

G — Delete Field Select Table ?
H — Create/update Display Format
I — Copy Display format
J — Delete Display Format
K — List database parameter files
X — Exit

Database: LIB
Max MFN : 27

Worksheet: LIB
Format : LIB

Micro CDS/ISIS — (c) Copyright Unesco 1988

You can select appropriate option according to your need. However, there is simpler way to do whatever you want. This is through the following option of Menu.

K — List database parameter files

* Select option K

You will see the following display.

Files defined for database : LIB
Worksheet Descriptions
1. LIB
Display Formats
2. LIB
Field Select Tables
3. LIB

M/D/C +.File number to Modify/Delete/Copy-<CR> for Menu

The file names are preceded by a number. These are to be referred while responding the prompt.

<CR> = To return to menu
Cn = To copy the file numbered n
Dn = To delete the file numbered n

Chapter V : How to Perform a Search

CDS/ISIS 2.3 provides two types of searches:

1) Inverted file based search

Here Inverted file terms are used as operands along with some operators to form a search query. This is faster method than free text search, however, it is restricted to only those fields that are defined in FST for inverted file.

2) Free text search

A string of characters in a field can be searched by this type of search. This can be applied to any field whether it is defined in FST for inverted file or not. This technique also shows the percentage of hits. However, such a search is sequential and can be time-consuming if all the records in a large datebase are searched. This time lapse can be reduced significantly by combining an inverted file-base search with a free text search. The search query is similar as that of inverted file based search query except that it starts with symbol "?" which indicates that it is free text search.

Searching the database

The following steps are involved in searching a 'database':

* Call ISIS Programs
* Select option S from main menu
* Select option S from the Information retrieval menu
* Type any term<Return>

* Press D to display search results
* Press <Return> to go back in Information retrieval menu
* Select T to display term dictionary
* Enter a key where you want to be positioned in the dictionary
* Browse through the dictionary. You can use arrow keys and <Page down> key.
* Select first term with "S"
* Select other terms (if you need) with the following options

Option	Implication
S/+	OR condition
*	AND condition
^	NOT condition

* After selection of terms press X

  You will see search query on the screen which you have built. You may make changes here if you so like.

  Press <Return>

  Press D to display terms.

  Press X to return to Main Menu

* Press X to exit CDS/ISIS

  Press Y to update Inverted file, **IF PROMPTED.**

Chapter VI : How to Perform Data Entry

In data entry you may either create a new record or modify a existing record.

1) Creation of new Record: steps involved

* Call ISIS program and select database "LIB"
* Select E from Main Menu
* Select N from data Entry Menu
* The worksheet for date entry is displayed on the screen.
* Fill the worksheet as you will any proforma. Press <Return> after entering data into each field.
* You can move through the worksheet by pressing <Return> to next field and <TAB> to previous record.
* After you have filled in the last record of the worksheet you will be provided with some options.
* Select X to end creating the current record and return to Data Entry Menu.

2) Editing of existing record: steps involved

* Select E from the data entry menu
* You would be prompted to enter the MFN or MFN range of the record or records you want to call for editing.
* Respond with desired MFN and press <Return>
* Worksheet, with values of the desired record filled in, will be displayed on the screen.
* Cursor is now placed against few options (from which you have to select one)
* Select M to modify the record.
* Edit the data of the record. It is similar to the process of creation of a record.
* You can leave the contents of a field unchanged by pressing <Return>.
* After you have edited the last field, you will be given few option. Select X.
* Press <Return> to go to data entry menu.
* : Press X to go to Main Menu.

Press X to exist ISIS.
Press Y to update inverted file

Chapter VII : How to Produce Printed (Unsorted or sorted) Reports

* Call ISIS Program
* Select C to select database
* Respond with CDS (sample database that comes with CDS/ISIS Program)
* Select P from the Main Menu
* A sub-menu (EXPRT) is displayed; select P.
* A system worksheet (EYPRT) is displayed

Various fields of EYPRT worksheet are:

a) Data Base Name
This database is used for printing reports. By default it is the current database. Since your current database is CDS, leave it unchanged and move to next field by simply pressing <Return>

b) MFN limits
This is used for selecting the range of MFN (S) to be printed. By default it is 1/32000 Change it to 1/30.

c) Save File Name
The result of a search can be saved by giving a name to the save file during the search stage. These saved records can be printed by giving here the name of the **save file.** Leave it blank for our exercise.

d) First Title
Whatever you typed here will be printed at the top of the printed report. If a * mark is placed as the first letter then the typed matter following it is printed on each page of the report. Type ***Listing for demonstration of printed reports** for our exercise.

e) Second Title
Same as above, but printed as second line.

f) Third Title
Same as above, but printed as third line.

g) Print Format
This format is used to format the records during printing. Three options are available:

i) *** Mark:** It is a system format used for preparing compact indexes.
ii) **@ Mark and a pre-defined format name**
iii) **An actual format in formatting language**

For our present exercise we will use an actual format type

MDL, V24 (4, 0), '(', MFN (3), ')' /#

h) Line width
It devotes the line width of the printed report. Press <return> to accept the default value for our exercise.

i) Number of Columns
The printed report can be in more than one column. Indicate the number of columns you want. Accept the default value for the pesent exercise.

j) Column width
Accept the default value for the present exercise.

k) Line/page
Accept the default value for the present exercise.

l) First page number
Accept the default value for the present exercise.

m) EOC Tolerance
It defines the minimum number of blank lines that must be available before printing the next record. If this condition is not satisfied, the next record is printed on top of next page. Accept the default value for the present exercise.

n) Data indention
It defines the number of spaces by which the headings and the record data would be indented. Enter 4 for our present exercise.

o) Sort?
If unsorted report is required then accept the default value N. However, if sorted report is required then enter Y. If you decide to sort the records before printing; a EYSRT system worksheet will be displayed; as soon as you complete and confirm the EYPRT worksheet. For our present exercise enter Y.

p) Sort worksheet name
If you want to sort records according to already defined sort worksheet then enter here the name of your sort work sheet, else leave it blank. For our present exercise just press <Return> to leave it blank.

q) Print file name
Enter here the name of file to which you want to send your output. If you want to directly send your output to the printer then enter LPT1. Enter LPT1 for our present exercise.

* Confirm worksheet values by pressing <Return>

Because we have specified 'Y' in the sort? field, CDS/ISIS now asks you to define sorting requirements through system worksheet EYSRT. Fill in this worksheet. Various fields and their values for the present exercise are discussed as follows:

a) Number of headings
Indicate the number of heading levels. It can be at the most equal to the number of sort keys. Press return to accept the default value 1 for our present exercise.

b) Stopword file Name
Enter the name of the stopword file if indexing technique 4 is used in any of the FST's used to generate sort keys. CDS/ISIS will ignore words listed in the stopword file while building the keys. Press return to leave it blank for our present exercise.

c) Heading format
Indicates the format for printing the headings. If empty, CDS/ISIS will provide a default system print format. Press <Return> to leave it empty for our present exercise.

d) Sort key parameters
There are four sort keys available. Thus you can specify up to four levels of sort, which will be treated in a hierarchical manner.

i) Key length
— specify the length of the sort key
— Total key length should be less than 256 characters.
— If key length specified is 20 characters for the title then only the first 20 characters are sorted. The sum of the key length and the length of the corresponding headings should not exceed 510 characters.

ii) Heading processing indicator
Indicate whether CDS/ISIS should build one or more sort keys for each element produced by the FST. Also indicates whether heading should be printed only when they change or printed in all cases.

— Enter 0 or 2 for single key generation. A key is build from the first element produced by the FST.
— Enter 1 or 3 for multiple key generation. A key is build from each element produced by the FST.
— To produce unique headings use values 0 or 1
— To print headings whether they have changed or not use values 2 or 3

	Unique headings	Non-unique headings
Single Key	0	2
Multiple key		3

iii) Field Select Table

Defines the contents of the sort key if applicable, of the corresponding heading.

— Enter the name of a predefined or enter one directly.
— For entering a predefined FST enter @NAME where NAME is the NAME of predefined FST.
— To provide an actual FST three components must be separated by a space. If a multiline FST is to be entered, each line should be separated by a + sign with a space on either side.

Values for sort key parameters for our present exercise

Length of First sort key	20		
Heading processing indicator	1		
FST for first sort key	1	0	(V70/)
Length of second sort key	70		
Heading processing indicator	0		
FST for second sort key	2	0	V24

* Leave Third and Fourth Sort Keys empty.
* Validate the entries by pressing<Return>
* After building the HIT File CDS/ISIS tells you how many records it contains
* Then it sorts the HIT File
* Finally it prints the output, which you see on the printer.

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BLS PROGRAMME

Course 7 : Computer Basics and Applications

Practical Exposure Programme

HAND-OUT 4

(Main Features of CDS/ISIS)

Introduction

CDS/ISIS stands for Computerised Documentation Services of UNESCO. ISIS stands for Integrated Set of Information Systems. This CDS/ISIS is a generalised Information Processing system designed specifically for the management of structured non-numercial databases. The first version of this package was developed by Unesco for mainframe computers (those of IBM series). A mini and micro version of this package was developed in 1985. This discussion relates to micro **version 2.3.**

Integrated means that the same set of programmes performs all the required functions. Unlimited number databases may be managed through this system. No programming is required to establish a new database. Once trained in the operational aspect of the package, the user does not require retraining for operating a new database. Some typical CDS/ISIS applications include:

i) Bibliographical databases
ii) Preparation of mailing lists and rosters
iii) Union list of serials
iv) directories of institutions and
v) management of institutions

CDS/ISIS is available **free of charge** to qualified non-profit institutions of the member countries of Unesco of which India is one.

Main features

CDS/ISIS is a **Menu Driven** software package. A 'Menu' is a list of system functions from which the **operator** selects **the one desired.** 'Menus' are simple to use as the operator is constantly reminded of options available at any given time. A sample menu is shown below:

C — Change database
L — Change dialogue language
E — Data entry services
S — Information Retrieval services
P — Sorting and printing services
I — Inverted file services
D — Data base definition services
M — Master file backup/restore and exchange services
U — System utilities
A — Advanced programming services
X — Exit (to MSDOS)

CDS/ISIS is a multi-lingual package

At present the package is available in English, French, Spanish, Hungarian and Arabic languages. The operator may select the language of his/her choice to interact with the system.

Important Operations

Data Entry

Data entry is made through work sheets designed by the user. For this purpose, there is a powerful worksheet editor, which allows the user to prepare the worksheet in a manner required by him for the creation of a specific database. A sample worksheet for a bibliographic database may have the following items of information.

Author .....
Title .....
Imprint .....
Collection .....
Keywords .....
Abstract .....

Information Retrieval

A sophisticated retrieval language built into the CDS/ISIS package, allows users to search the records input into the database by the contents of any data element such as:

By personal name
By subject descriptors or topics
By name of institution
By words in the title, abstract or combination of words etc.

Printing Facilities

The CDS/ISIS system has a powerful printing facility. It facilitates the user to produce virtually any type of report such as a **bibliography, catalogue** or **index** or any other type of reports needed.

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