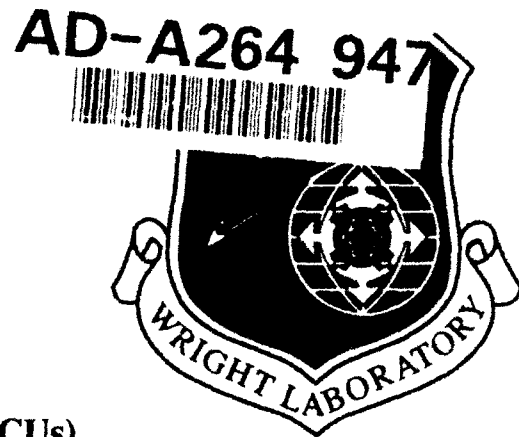


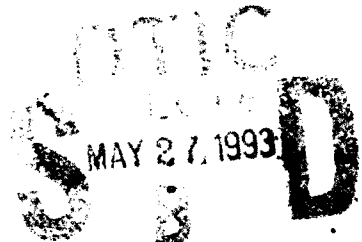
WL-TR-92-3109



**Flight Dynamics Directorate (FDD)
Historically Black Colleges and Universities (HBCUs)
Database Management System: A User's Guide**

James R. Johnson
CSA Engineering, Inc.
2580 W. Bayshore Road
Palo Alto, CA 94303

November 1992



Final Report for Period May 1991 - September 1992

Approved for public release; distribution is unlimited.

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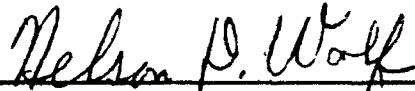
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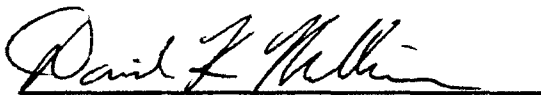
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FOREWORD

This report was prepared by the Aerospace Structures Information and Analysis Center (ASIAC), which is operated by CSA Engineering, Inc. under contract number F33615-90-C-3211 for the Flight Dynamic Directorate, Wright-Patterson Air Force Base, Ohio. The report presents the work performed under ASIAC Task No. T-04. This effort was sponsored by the Structural Integrity Branch, Structures Division, Flight Dynamics Directorate, WPAFB, Ohio, with Mr. Christopher Clay as the technical monitor. The analysis was performed by Mr. James R. Johnson for CSA Engineering, Inc.

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Table of Contents

<u>Section</u>	<u>Page</u>
1. INTRODUCTION	1
2. HINTS FOR USING THIS GUIDE	2
3. SYSTEM REQUIREMENTS	2
4. INSTALLING THE PROGRAM	3
5. RUNNING THE PROGRAM	3
A. Starting the program	3
B. Banner Screen	3
C. Main Menu	4
(1.) HBCUs/SCHOOLS	4
a. Browse The HBCUs School Database	4
b. Enter A New School	5
c. Edit An Existing School	5
(2.) FACULTY/STAFF/STUDENT	6
a. Browse The People Database	6
b. Add People To The Database	6
c. Edit An Existing Member	7
1 By School_ID	7
2 By Name	7
(3.) RESEARCH FACILITIES	7
a. Browse The HBCUs Facilities Database	7
b. Add New/Different Research Facilities	7
c. Change/Modify Existing Facilities	7
(4.) REPORTS	7
a. Print Listing of Schools	7
b. Print Listing of People Database	8
c. Others	8
(5.) EXIT TO DOS (Quit)	8
APPENDIX: Database Structures	9

Illustrations

<u>Figure</u>	<u>Title</u>	<u>Page</u>
Figure 1	- Banner Screen	3
Figure 2	- Main Menu Screen	4
Figure 3	- HBCUs/SCHOOLS Screen	4
Figure 3a	- Schools Browse Table	5
Figure 3b	- Schools Input Screen	5
Figure 4	- FACULTY/STAFF/STUDENT	6
Figure 4a	- People Browse Table	6
Figure 4b	- People Data Input	6
Figure 4c	- Edit People Screen	7
Figure 5	- RESEARCH FACILITIES	7
Figure 6	- REPORTS Screen	7
Figure 6a	- Listing of Schools	8
Figure 6b	- Listing of People	8

1. INTRODUCTION

The Flight Dynamics Directorate (FDD), Historically Black Colleges and Universities (HBCUs) Database Management System (DBMS) is designed to run on a stand-alone personal computer (IBM or Compatible). The program operates from the DOS Prompt and requires no special or additional software.

The databases can be used, without any modification, by dBASE III, dBASE III Plus, dBASE IV, Lotus Works, Alpha Works, Formworx and other programs that use dBASE compatible files. dBASE users should create new index (.NDX) files.

The program employs a task oriented design philosophy. Its features are not bound to any particular program structure or code. Therefore, the program is very user friendly and its utility is not restricted to HBCUs data.

The people database is linked to the COSATI Codes database. This link provides the capability to match research interests with disciplines of interest to FDD.

The research facilities database contains one-of-a-kind/unique/novel/special facilities. Basic facilities required for academics (e.g., computer labs, engineering labs, etc.) are not included.

Multiple linked databases are used to preclude the duplication of all data (input, storage, retrieval) and to reduce input data requirements and Verification and Validation (V&V) of items. The "SCHOOL_ID" field is the common field for linking and this field is "Autoplugged" in the school database. The program provides a lookup database to Autoplug the "SCHOOL_ID" in the people input data form.

The databases are accessed and manipulated via a nested menu structure. The Top Level (Main) Menu and Submenu items are program "COMMANDS" which are individually selectable. These Menu items (COMMANDS) provide for viewing, adding to, editing and changing, searching and getting reports (screen, hardcopy, file) from the databases. COMMANDS can be executed by pressing the first letter of the Menu item.

This Database Management System was developed using Alpha Software Corporation's ALPHA FOUR, Version 2.0, computer program.

2. HINTS FOR USING THIS GUIDE

- Skim the Introduction to get an idea of what the FDD/HBCUS DBMS program can do.

- Check the System Requirements, "BEFORE YOU BEGIN," to make sure you're set up to work with this program.

- Go through the "Quick Tour" (Section 5) from beginning to end to learn about some of the features.

- Then, start using the program for your own work and read the Help prompts/Explanations at the bottom of each screen. You can press the escape (ESC) key, at any time, when you get stuck or want to back out of an option.

- Whenever you see the letter F followed by a number (for example, F3), press the actual key labeled F3 on your keyboard. These are "function keys" and are used throughout the program.

- Always EXIT/QUIT the program from the Main Menu item "EXIT TO DOS" to ensure that all files are properly closed.

- This is a Beta Version of the program. A production version is expected to be completed soon. User comments, errors encountered, program limitations and desired program enhancements should be forwarded to:

WL/FIVS/Mr J. Hodges
WPAFB, OH 45433-6553

3. SYSTEM REQUIREMENTS

To run this program, you must have an IBM (or compatible) personal computer with 512K RAM (640 K recommended), one floppy disk drive and a hard disk. Additional memory beyond 640K in the form of expanded (EMS) or extended (XMS) memory will improve program performance. DOS version 3.1 or above is required.

This program supports the following video adapters: monochrome, Hercules, CGA, EGA and VGA.

A printer is recommended, but not required. Dot-matrix, letter quality and laser printers, including Postscript printers are supported.

4. INSTALLING THE PROGRAM

To install the program:

1. Place the Program Disk 1 in drive A.
2. Type A: and press ENTER.
3. Type SETUP and press ENTER.
4. Follow the on-screen instructions.
5. At a minimum, you should set FILES to 40, as shown in the sample CONFIG.SYS file below:

```
FILES=40  
BUFFERS=32
```

5. RUNNING THE PROGRAM

- A. Starting the program.
Switch to the program sub-directory and type FDDHBCUS and press ENTER.
- B. Banner Screen.
When finished loading, the program displays the Banner Screen (Figure 1) and prompts you to press ENTER to continue.

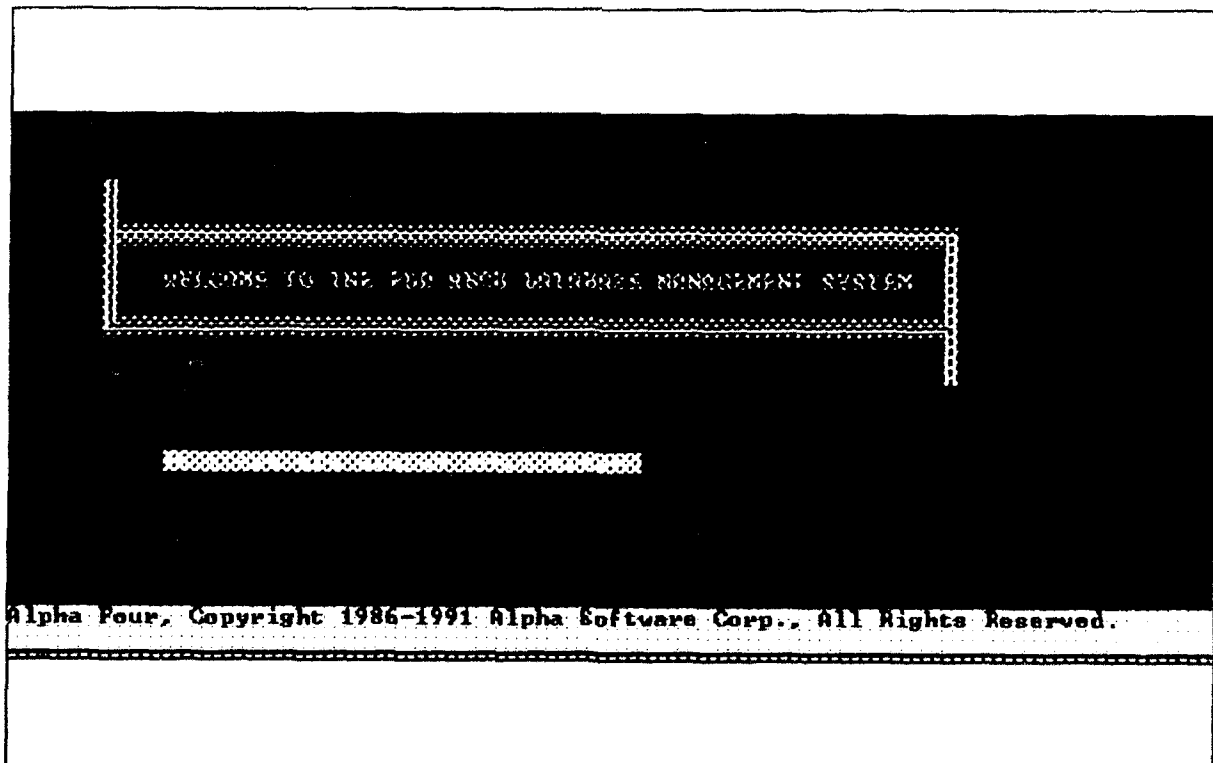


Figure 1 - Banner Screen

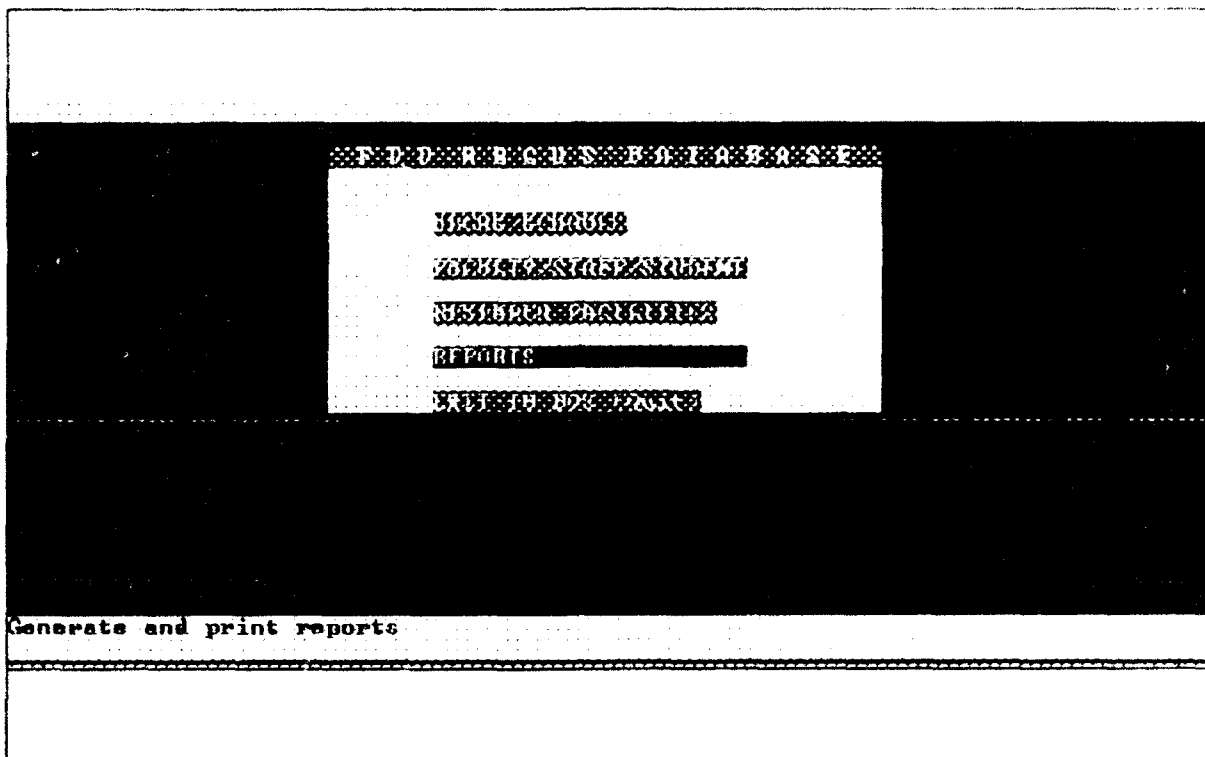


Figure 2 - Main Menu Screen

- C. Main Menu. The Main Menu is then displayed with five choices (Figure 2). All of the program commands are accessed through this menu. Choose (or pick) menu items by pressing the first letter highlighted on a line or by using the up/down cursor keys to highlight an item and press ENTER. Always choose EXIT TO DOS when quitting the program to ensure that your files are properly closed.

(1.) HBCUS/SCHOOLS

a. Browse The HBCUS School Database. Highlight this item and press ENTER. Records in BROWSE mode are shown across the screen, with one record to a row. The field names are displayed as titles across the top of the screen. Use the up/down, pg_up,

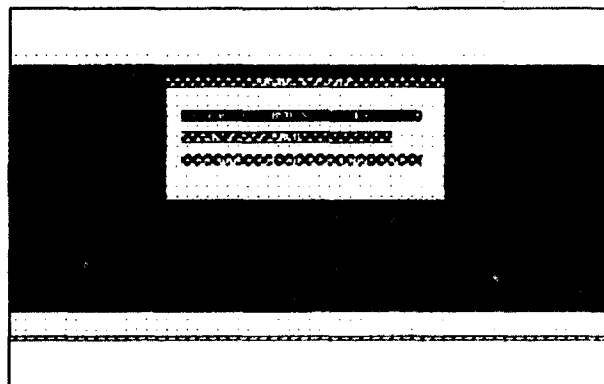


Figure 3 - HBCUS/SCHOOLS Screen

pg_dn, and left/right cursor keys for browsing (Figure 3a). When finished browsing, press M (Main Menu).

SCH	SCHOOL	ADDRESS1	CITY	ST	ZIP	SCHOOL_TEL
101	Alabama A&M	P.O. Box 908	Normal	AL	35762	205 801 5675
102	Bennett College	903 E. Washington St	Greensboro	NC	27410	919 273 4431
103	Central State U.	1400 Brush Row Road	Wilberforce	OH	45364	513 376 6478
104	Clark Atlanta U.	111 James P. Brawley DrSW	Atlanta	GA	30314	404 520 8000
126	Dillard University	2601 Gentilly Blvd	New Orleans	LA	70112	504 286 4722
105	Florida A&M	M L King Blvd	Tallahassee	FL	32307	904 599 4115

Figure 3a - Schools Browse Table

b. Enter A New School. Highlight this item and press ENTER. The program displays a blank data entry screen with the fields displayed along the left edge of the screen (Figure 3b)

The SCHOOL_ID is auto-plugged. To save this record and start another new record, press ENTER. The program displays another blank ENTER screen.

c. Edit An Existing School. Highlight this item and press ENTER. The program displays a BROWSE TABLE of the database (see section (1)a. Highlight the entry for editing and press "C" for Change. Type the new information and press ENTER.

When finished, press F10 to save the changes and "M" to return to the Main Menu.

1	SCHOOL	:
2	ADDRESS1	:
3	ADDRESS2	:
4	CITY	:
5	STATE	:
6	ZIP	:
7	SCHOOL_TEL	:
8	SCHOOL_ID	:
9	CONTACT_LN	:
10	CONTACT_FN	:
11	CONTACT_MI	:
12	CONTACT_TIT	:

ENTER	Record : 24
Enter the School Name (REQUIRED)	
F2 Options F10 Save Esc Forget	

Figure 3b - Schools Input Screen

(2.)

FACULTY/STAFF/STUDENT (Figure 4)

a. Browse The People Database (Figure 4a). Highlight this item and press ENTER (see section 1.a above).

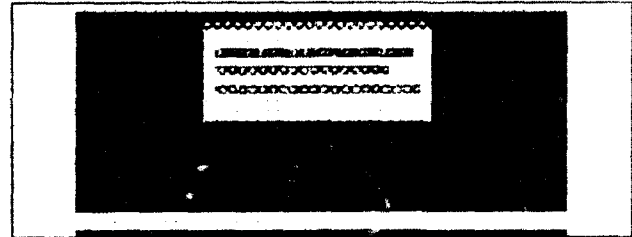


Figure 4 - FACULTY/STAFF/STUDENT

SCH	TITLE	F	LNAME	F	S	A	C	PHONE	DEPT	RENY
114	Prof	V	Avva	Y	N	N		919-334-7620	Mechanical Engineering	
118	Dr	S	Bozeman	Y	N	N	N	404-223-7621	Mathematics	
110	Mr	O	Deik	N	N	Y	N	404-215-2620	Development	
110	Dr	R	Dixon	Y	N	N	N	404-215-2615	Physics	
114	Ms	V	Howard	N	N	Y	H	919-334-7995	Research	0
114	Mrs	P	Jeffries	N	N	Y	N	919-334-7684	Administrative	0
110	Dr	A	Jones	Y	N	N	N	404-215-2628	Accounting Computer Science	

Figure 4a - People Browse Table

b. Add People To The Database. Highlight this item and press ENTER. The program displays a custom data input screen (Figure 4b). Note the status line at the bottom of the screen for data item requirements/definitions. Also, when F3 is present, press this key to highlight and select a data entry from a lookup table/database. When you reach the NOTES field, you must press ALT-M (Memo Editor) to enter the data into this memo field, and F10 (Save) to save the memo. Save the new record by pressing F10 (Continue). When finished, press "M" for Main Menu.

HBCUS People Database				
ID: ____	TITLE:			
FIRST NAME:	MIDDLE NAME:			
LAST NAME:	FACULTY:	STUDENT:	ADMIN:	CONTRACT:
TELEPHONE1:	TELEPHONE2:		FAXNO:	
DEPARTMENT:	MAIL CODE:			
RESINT01:	RESINT02:	RESINT03:	RESINT04:	RESINT05:

Figure 4b - People Data Input

c. Edit An Existing Member.
Highlight this item and press ENTER. Two choices are presented (Figure 4c).

1 By School_ID.
Highlight this item and the program prompts you for the school name or ID.

2 By Name.
Highlight this item and the program prompts you for the Lastname.

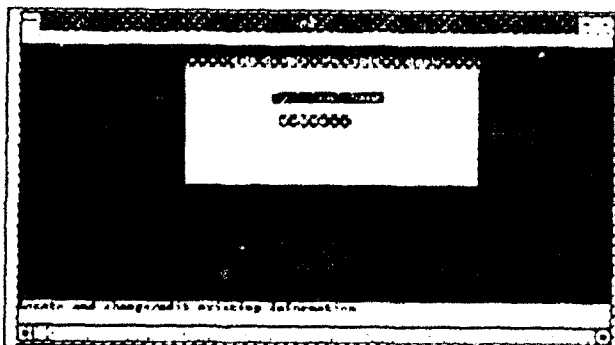


Figure 4c - Edit People Screen

(3.) RESEARCH FACILITIES (Figure 5)

a. Browse The HBCUS Facilities Database,
(see section (1)a, above for browsing method).

Highlight this item and press ENTER.

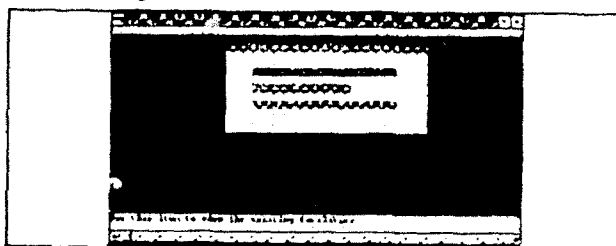


Figure 5 - RESEARCH FACILITIES

b. Add New/Different Research Facilities.
Highlight this item and press ENTER. The program displays a screen for data input.

c. Change/Modify Existing Facilities. Highlight this item and press ENTER.

(4.) REPORTS (Figure 6)

a. Print Listing of Schools.

(Figure 6a)

Highlight this item and press ENTER. The program prompts you for the output destination (screen, printer or file).

Highlight the desired choice and press ENTER.

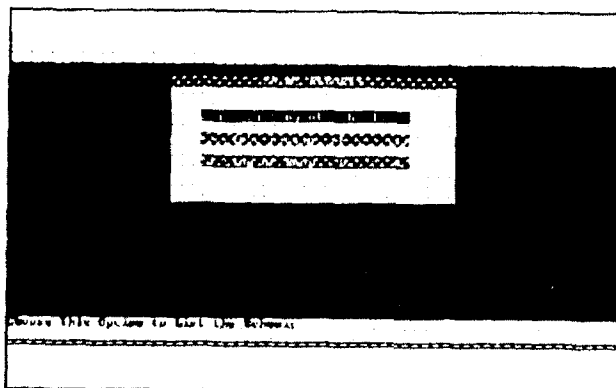


Figure 6 - REPORTS Screen

b. Print Listing of People Database. Highlight this item and press ENTER. The program prompts for print options (see (4)a, above).

c. Others. Additional reports to be added.

Flight Dynamics Directorate Schools Listing					
SCHOOL	CITY	ST	ZIP	TELEPHONE	
Alabama A&M	Normal	AL	35762	206-491-6679	
Bennett College	Greensboro	NC	27410-3238	919-271-4431	
Central State University	Wilberforce	OH	45384	513-376-6479	
Clark Atlanta University	Atlanta	GA	30314	404-880-8000	
Dillard University	New Orleans	LA	70122-3027	504-286-4720	
Florida A&M	Tallahassee	FL	32307	904-599-3115	

Figure 6a - Listing of Schools

SCH	TITL	FNAME	MNAME	LNAME	PHONE
114	Prof	Vishnu	Sarma	Avva	919-334-7620
118	Dr	Sylvia	T.	Bozeman	404-223-7621
110	Mr	Oliver	R.	Delk	404-215-2620
110	Dr	Robert	M.	Dixon	404-215-2615
114	Ms	Valerie	Denise	Howard	919-334-7995
114	Mrs	Paula	Mason	Jeffries	919-334-7884
110	Dr	Arthur	M.	Jones	404-215-2628

Figure 6b - Listing of People

(5.) EXIT TO DOS (Quit). Highlight this item and press ENTER. The program returns you to the DOS prompt.

APPENDIX Database Structures

A. Database Structure for HBCUS, HBCUSN.

	Field	Type	Width	Decimal Places
1.	SCHOOL	C	35	
2.	ADDRESS1	C	25	
3.	ADDRESS2	C	25	
4.	CITY	C	15	
5.	STATE	C	2	
6.	ZIP	C	10	
7.	SCHOOL_TEL	C	12	
8.	SCHOOL_ID	N	3	0
9.	CONTACT_LN	C	15	
10.	CONTACT_FN	C	1	
11.	CONTACT_MI	C	1	
12.	CONTAC_TIT	C	4	

B. Database Structure for HBCUPEOP.

	Field	Type	Width	Decimal Places
1.	SCHOOL_ID	C	3	
2.	TITLE	C	4	
3.	FNAME	C	15	
4.	MNAME	C	15	
5.	LNAME	C	15	
6.	FACUL	C	1	
7.	STUDE	C	1	
8.	ADMIN	C	1	
9.	CONTR	C	1	
10.	PHON1	C	12	
11.	PHON2	C	12	
12.	FAXNR	C	12	
13.	DEPMT	C	25	
14.	MAILC	C	15	
15.	RESI1	N	4	0
16.	RESI2	N	4	0
17.	RESI3	N	4	0
18.	RESI4	N	4	0
19.	RESI5	N	4	0
20.	RESI6	N	4	0
21.	RESI7	N	4	0
22.	RESI8	N	4	0
23.	RESI9	N	4	0
24.	RESI10	N	4	0
25.	NOTES	M	10	

C. Database Structure for HBCURESD.

	Field	Type	Width	Decimal Places
1.	RES_INT	C	4	
2.	RES_SUB	C	55	

D. Database Structure for FACILITY.

	Field	Type	Width	Decimal Places
1.	SCHOOL_ID	C	3	
2.	FACINAME	C	60	
3.	FACIDESC	C	234	