



PES UNIVERSITY
(Established under Karnataka Act No. 16 of 2013)
100 Ft. Road, BSK III Stage, Bengaluru – 560 085

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Title: Problem Solving with C Laboratory		
Course code: UE19CS152		
Semester : II sem	Section: K	Team Id: 3
SRN: PES1UG19CS519	Name: Sumukh Raju Bhat	(Roll no:39)
SRN: PES1UG19ME031	Name: Anush D	(Roll no:60)
SRN: PES1UG19CV056	Name: G Vamsi Krishna	(Roll no:37)
SRN: PES1UG19EC216	Name: Prem Kumar L	(Roll no:57)

PROJECT REPORT:
“Hospital management system”

Problem Statement:

- *A digitalized effort to reduce a hospital’s front desk burden.
- *A step towards reducing paperwork and maintaining efficient order in data access and arrangement.

Description:

- *In order to provide a decent user-interface for the job, a border,coloured texts and output to a specified position of a screen is given.
- *A transparent choice based selection process to access a file based database.
- *Various choice to arrange or access data i.e w.r.t date of admission,name of the patient,category as OPD or emergency respectively.
- *Maintain financial records and the mathematics for the patient,as well as the hospital management w.r.t balance,totalfee,amount to be received or given.
- *Clear categorization various specialists and their room numbers and various tests and their fees.
- *Easy way to get rid of record(delete) and bill his finances once a patient discharges.

C-concepts used:

- *'switch' and 'if-else' statements for choice-making.
- *'gotoxy(x,y)' to position the output,'textcolor(n)' to color the text,'clrscr()' to clear the screen for new output.
- *Binary file read/write operations for database access purpose.
- *Structure variables for scanning and printing a group of patient's data , a way to store/access from a file.
- *'rewind(fp)', 'fseek(fp,offset,position)', 'ftell(fp)' to get file pointer position operations.
- *'fflush(stdin)' to clear input buffer,'cprintf()' to avoid output data to print on the buffer or stdout , but to directly print it on the console.The whole idea is to avoid errors/ambiguity in character input/output .
- *String comparison and sorting techniques to access data.
- *'remove(filename)', 'rename(filename1,filename2)' in the deleting process.
- *The below are the user defined functions and their functions:
 - 1) mainscreen()=>clear the screen and border the screen with '*'s.
 - 2) newrecord()=>scan name,age,address,gender,specialist,room etc
 - 3) newrecord1()=>scan the tests and their fees.
 - 4) editrecord()=>access to edit record via switch1() when pressed '1'.
 - 5) switch1()=>when pressed '1' to edit test/doctor/catogory or deposit
 - 6) print()=>display all the scanned and maintained data.
 - 7) bill()=>Financial care:total fee,balance,to be paid/returned,test fee
 - 8) displaydepartment()=>display all the specialists and their room no
 - 9) displaytest()=>display all the tests and their fees.
 - 10)'delete' records in main().

NOTE:Some of the above mentioned/used is compiler specific!.We used turboc's compiler to code the project.

Learning Outcome:

- *Integrate all the concepts of record management into a simple program.
- *Decent user-interface in c-programming language.
- *String sorting in a particular order from a file.
- *Using file as a database of a large variety of data.
- *Miscellaneous file operations and file pointer manipulations.
- *Overview of database management with known information in C-programming language.
- *Financial management of data.

Output Screenshots:

CARE AND CURE HOSPITAL
DISPLAYING RECORDS

Patient no:6
Name: Ashish
Address: honnavar
Age: 89
Sex: m
Date of Reg.: 2020/02/03
Room no: 302
Department: E.N.T
Details: Admitted to O.P.D.

CARE AND CURE HOSPITAL
*****Bangalore*****

Enter the 'Date' of a paricular day(yyyy/mm/dd):2020/02/03

Fig1-Display

Fig2-Date of display

CARE AND CURE HOSPITAL
*****Bangalore*****

Ready to Display records of O.P.D Patients

Press 'Enter' to continue_

CARE AND CURE HOSPITAL
*****Bangalore*****

The list of expenditure of patient no:4

1) Emergency Charge Rs.250.00
2) X-ray Rs.300.00
3) Bed Rs.150.00

Total charge=Rs.700.00
Total Deposited:Rs.1250.00
Press 'Enter' for next and 'q' to quit: q_

Fig3-display OPD patients

Fig4-financial details

CARE AND CURE HOSPITAL
*****Bangalore*****

Ready to Display records of Emergency Patients

Press 'Enter' to continue_

CARE AND CURE HOSPITAL
*****Bangalore*****

Ready to Display the patient records according to alphabatecal order of names

Press 'Enter' to continue

Fig5-display emergency patients

Fig6-display in alphabetical order

CARE AND CURE HOSPITAL
*****Bangalore*****

Enter the corresponding no

1.Records of patients in alphabatecal order
2.Records of Emergency patients
3.Records of O.P.D. patients
4.Records in paricular date
5.Return to main menu
Enter your choice:

CARE AND CURE HOSPITAL
*****Bangalore*****

PRICE LIST:
1.X-Ray Rs. 300.00
2.Ultra-sound Rs. 500.00
3.C.T.Scan Rs.1000.00
4.TC,DC,HB Rs. 90.00
5.Urine R/E Rs. 80.00
6.Blood C/S Rs. 250.00
7.Bilirubin D/T Rs. 200.00
8.Stool Test Rs. 60.00
9.Bed Charge Rs. 150.00
10.Sugar Test Rs. 400.00

Type 'esc' to content to stop
Contents Rs.
X-ray 300
Bed Change 150
esc
Paid/Unpaid (p/u):u

Fig7-options to access records

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*****CARE AND CURE HOSPITAL*****
*****Bangalore*****

DEPOSITING MONEY

Deposited balance: Rs.1000
  
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Fig8-Add tests

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*****CARE AND CURE HOSPITAL*****
*****Bangalore*****

CHANGING SPECIALIST

Specialists:      Room No.
1.General Physician  201
2.E.N.T            302
3.Cardiologist      509
4.Dermatologist     406
5.Gastroenterologist 308
6.Pediatrician      111

Previous Specialist: Dermatologist
Enter the new changed Specialist:
Reff. Specialist no:1
Reff.Specialist:Generalphysician
Room no:201_
  
```

Fig8-Deposit balance

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*****CARE AND CURE HOSPITAL*****
*****Bangalore*****

ADDING DETAILS

Previous Details:
Admitted to Emergency-> Discharged
Enter New Details:Free
  
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Fig9-Change specialist

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*****CARE AND CURE HOSPITAL*****
*****Bangalore*****

Enter

1.Add Details
2.Change Specialist
3.Deposit balance
4.Add test
5.Return to main menu
Enter your choice:_
  
```

Fig10-Change patient status

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*****CARE AND CURE HOSPITAL*****
*****Bangalore*****

The list of expenditure of patient no:4

1) Emergency Charge Rs.250.00

Total charge=Rs.250.00
Total Deposited:Rs.250.00
Total money to return=0.00

Press '1' to edit or add and any key to go to main menu:_
  
```

Fig11-Details to edit

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*****CARE AND CURE HOSPITAL*****
*****DISPLAYING RECORDS*****

Patient no:4
Name: Hema
Address: gujrat
Age: 12
Sex: f
Date of Reg.: 2020/02/02
Room no: 406
Department: Dermatologist
Details: Admitted to Emergency
  
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Fig12-Financial details

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*****CARE AND CURE HOSPITAL*****
*****ADDING NEW O.P.D.PATIENT RECORD*****

Record of patient no: 9
Name: Ramja
Address: Geetanjali nagar
Age: 12
Sex(m/f): f
Dise(In Short):cold
Reff. Specialist no:6
Reff.Specialist:Pediatrician
Room no:207_

Specialists:      Room No.
1.General Physician  201
2.E.N.T            302
3.Cardiologist      509
4.Dermatologist     406
5.Gastroenterologist 308
6.Pediatrician      111
  
```

Fig13-Display records

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*****CARE AND CURE HOSPITAL*****
*****Bangalore*****

Enter the corresponding no

1.Add new patient record
2.Search or edit record
3.Know the records of patients
4.Delete the records
5.Exit from the program
Enter your choice:
  
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Fig14-Scan Records

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*****
CARE AND CURE HOSPITAL
*****Bangalore*****
*****

The list of expenditure of patient no:4

1) Emergency Charge Rs.250.00
2) X-ray           Rs.300.00
3) Bed             Rs.150.00

Total charge=Rs.700.00
Total Deposited:Rs.1250.00
Press 'ENTER' to delete this record_
Total money to return=550.00
*****
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Fig15-Mainscreen

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*****
CARE AND CURE HOSPITAL
DISPLAYING RECORDS
*****

Patient no:4
Name: Hema
Address: gujrat
Age: 12
Sex: f
Date of Reg.: 2020/02/02
Room no: 201
Department: General Physician
Details: Admitted to Emergency-> Discharged-> Free
*****
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Fig16-Bill before Deletion

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*****
CARE AND CURE HOSPITAL
*****Bangalore*****
*****

Record succesfully deleted!_
*****
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Fig17-Record after edit to status of patient

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*****
CARE AND CURE HOSPITAL
*****Bangalore*****
*****

THANK YOU...._
*****
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Fig18-Confirmation after deletion

Fig19-Exit page

Name and Signature of the Faculty