**Programming in c**

**Topic: Hospital management**

**Date: 22/4/2019**

**Description:**

Today we have done a mini project on the topic hospital management. This program allows the user to login as a doctor as well as a patient. We have used two main structures: one for doctor and other for patient. We used a large number of functions and reduced the number of for loops so that the time taken for compilation is reduced. When the program is first compiled and ran it asks u whether you are a doctor or patient. Choose the role you want. The program runs and collect the data. You can display the data, modify the data, add a new data. the patient login prompts you to enter your weight, height, blood pressure, blood sugar level. we have also created a warning system to show patients if their weight or blood pressure is out of control. The main logic we used is the if statement so that if you login with your username, the screen should display your details. Here you can create many number of users. The patient can give their problem as input. We have created an option for patients to take appointment, choose the doctor for the time they are comfortable with. The patient can check the available dates of a doctor.

For the doctor the program asks whether you’re are a new user or old user. If you are a new user, create a new user id and password. If the password is less the than 5 characters it displays a message like “please enter a strong password”. If you enter a pre existing user id it displays a message “existing user id “. The programs ask you to enter your details like contact number, email id, available dates in a month, expected salary and your specialisation degree. If you are a pre-existing user you can update your details. we have given a option to check the number of appointments on the give day. the doctor can check the details of other doctors. The doctors can check the details of the patients. Once you’re finished with logout the id.

In the main function we created a prompt to choose between patient or doctor and call the respective functions. We created different functions for different purposes like getting input, displaying the details, etc. we used switch statement to call different functions according to the users request. We created a pop-up display to show an error if you enter a wrong password and you will be logged out of the profile if you enter the wrong password for more than 5 times. we used pointers to update a existing data. the data given is stored in a binary file. A separate file is created doctor and a patient. Once the data is saved, it is written in the corresponding file. The data stored in file is opened in “rb+”(binary file which can be read and written).

**MODULES**

1.Docavail()

Lists the availability of doctors in the specified date. we are reading a single doctor details at a time and checking whether they are available at the date specified.

2.getdate()

Used to get todays date.

3.docupdate()

Used for updating any of the doctor details like specialization, name, mail, age etc.

4.docsignup ()

Used to input all the doctor details.

5.docdetails()

Used to print all the doctor details.

6.appointments()

Lists the appointments for any doctor in today’s date.

7.doclogin ()

Used to login for doctors using username and password and call the respective functions.

8.patdet()

Displays the respective patient details of a doctor.

9.patsignup()

Used to get the username and password and all other details.

10.details()

Prints the details of a patient who has currently logged in.

11.chechupdate()

Used to find the next date of checkup and days remaining from today.

12.health ()

Used to check blood pressure and blood sugar level.

13.docavail()

Used to check the availability of today’s doctors and to check whether the doctor preferred by the patient is available in the hospital.

14.bmi ()

Used to Check the body mass index of the patient and to check if he is obese lean or normal.

15.appoint ()

Used to check the availability of all doctors available today and to get an appointment from any one of them.

16.patupdate()

Used to update any of the patient details who has currently logged in.

17.patlogin ()

Used to login for patient using username and password and call respective functions.

**Concepts used:**

Binary files are directly used to read and write structures. Selective conditionals are used control the flow of program. “goto” function is used to repeat the set of code. Pointers are used in the program where ever necessary to change the value in the program. “rb+” mode is used to read and write binary files. “fseek” and “rewind “commands are used move the file pointer. “fread” and “fwrite” are used to read and write in the binary file. “feof” function is used to check end of file. The concept of array of structures, nested structures is used. The file operation is done in binary mode and finally displayed in text mode.