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Group : 11

Topic : Library Management

Meet 1 -06/10/14:

Today we met to decide the project for our project. We had many topics on our mind like chain reaction, minesweeper, chat application, management systems.

We chose library management as we thought it had good learning scope and application.

Meet 2-11/10/14:

This meet was kept to discuss the rough structure of what our program will be. Today we saw some sample programs of library management from net and previous years projects to get an idea of what all has to be included in our project.

Meet 3- 15/10/14 (lab meet)

Today, we discussed about the basic layout of our project. We discussed on the functionalities we will provide in our program(library manager).

After discussion, the decided functions (tasks) are as follows (These are not final): creating a database, linking it to c++, search, add, delete, issue, return of books, creating a user interface, linking c++ to email (for informing of pending return of book). Everyone was allotted work for the upcoming days. I took the task of creating and linking of database to c++.

For creating and linking of database, I did research on internet. The database has to be created on mysql (or any other sql software).

I started searching for the commands to create database in mysql. Here are the links which I found extremely relevant for creating and linking of database :

1. <http://dev.mysql.com/doc/refman/5.0/en/creating-database.html>
2. <http://dev.mysql.com/doc/refman/5.1/en/creating-tables.html>
3. <http://dev.mysql.com/doc/refman/5.1/en/loading-tables.html>
4. <http://dev.mysql.com/doc/refman/5.1/en/retrieving-data.html>

5. <http://cbsecsnip.in/tutorial/how-to-connect-MySQL-database-with-CPP/how-to-connect-MySQL-database-with-CPP.php>

6. <http://www.crazyengineers.com/threads/database-connectivity-using-c-c-tutorial.23155/>

We discussed the individual work to be done before the first evaluation.

So next I will start learning how create and link a database using mysql from the above tutorials.

16/10/14: 2 hrs : I downloaded the mysql software. I started reading the tutorials on how to create database on mysql.

17/10/14: 2.5 hrs : I tried the commands in the mysql software but they were unable to compile. It kept showing the same error (Access denied to user'localhost').

I could not solve the problem.

19/10/14: 4 hrs : We compiled the srs document and the user manual. I edited the srs document and made the user manual.

21/10/14: 3hrs: Today, I sorted out the problems with MySQL. It is now working properly. I learnt to create database (in the command prompt), tables, loading data into the table. I could not link MySQL to codeblocks.

29/10/14 (Lab meet)-8:30 to 10:15

As it was decided that we will not be using mysql for creating the database, me and Sahith (who are responsible for database creating and updating) did research on structures and file handling in cpp. We learned about various commands in file handling (opening, closing, read, update, scanf, printf, rewind, position, end of file, seek). We also tried implementing those commands in code::blocks. As for structures we created the data structures to be used in our program i.e. book details, student details, issue details, by using nesting structures. I also looked into other header files which could be used. On searching, I found some commands in header files which could simplify our search algorithm (strlwr which converts any uppercase letters in str to lowercase without altering other characters, qsort, bsearch : binary search)

So next me and Sahith are going to work more on file handling and structures (creating and updating of database).

05/11/14 - lab meet-8:10-9:50pm

Today, I did more of file handling. I saw the lecture slides again to get a better hold of the topic. As file handling is the most important part of our project, I decided to devote more time on studying file handling before starting the writing of code. We made the basic structure of the program (deciding the functions and their format). We also did research on search algorithm. We found Boyer-Moore Algorithm very interesting and precise. Sites surfed : wikipedia, geeksforgeeks, codeproject.

16/11/14 (2.00-4.00)- We completed the main function today. Functions are yet to be made. We dropped the idea of graphics as our program neither required graphics nor it was feasible. I saw the lecture slides of simple cpp and tried to implement them. There were mainly two problems : I was unable to get display in the second canvas (2nd time initCanvas). Nothing was printed the second time. Also the keyboard input had to be given in the terminal, which was less user friendly than the terminal itself.

18/11/14 (11.00-1.30)- We completed the functions of the librarian. It took us a lot of time to get it perfectly working. Debugging was the most time consuming part.

21/11/14 (9.30-11.00)- Today we further modified our program. Earlier it was not designed to take space as input. We had to spend a lot of time to sort it out. We tried `cin.ignore()` , and `cin.getline` but while execution it didn't wait for the input. On researching more we found that we had to use `fflush(stdin)` before it as sometimes there is something in the buffer memory which gets taken as input. `fflush(stdin)` clears it. We applied colours in our terminal which removed the monotonous look of our program.

22/11/14(2.00-4.00)- Today our program was essentially complete. We wrote the patron functions too.

23/11/14 (8.00-3.00)- Today we worked on Mugil's program. We tried and corrected his search algorithm.

24/11/14 (2.00-11.00)- We further work on mugils program, but its still not working. So we are submitting our program.