MY DIARY:

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WEDNESDAY, 1ST OCTOBER:

I formed my CS101 project team and had an intro with my new friends. We had a talk about what topic to choose for the project but did not have much idea on the topics and their implementation. I volunteered to be a group leader which was accepted by everyone in the team.

SATURDAY, 5TH OCTOBER: (6pm – 5am)

In the perspective of my new CS101 project and wncc competition I learnt some of the basic concepts of HTML, CSS and JAVA languages to prepare my first webpage.

SUNDAY, 6TH OCTOBER: (6pm – 9pm)

I had an overview of the project topics uploaded on the course homepage and analysed the different projects which were previously done by seniors and the new project ideas suggested by my professors.

WEDNESDAY, 9TH OCTOBER: (9.45pm – 10.00pm)

I and my team mates finalized the project topic to be pursued. We chose library management database system as our project header since it involved rigorous use of C++, SQL, HTML and CSS(if required) to have a user friendly and interactive environment and also under the expectations of learning more of programming knowledge and also on the algorithms side as searching techniques in a large database require efficient and time prudent algorithms.

SATURDAY, 11TH OCTOBER: (1.00am – 2.00am)

Today we had our first team meet officially. Today as we did not have much idea on what all we were going to do in the project, we started from scratch to

understand the requirements of the projects. We decided to make a research on the topics which each one suggested to be used in the project and make further advancements after our next lab session.

MONDAY, 13TH OCTOBER: (11.00pm – 11.30pm)

Had a talk with friends about the project and the last fifteen minutes I had a look at the stackoverflow solutions for integrating databases created using sequel with the mainstream C++ program.

WEDNESDAY, 15TH OCTOBER: (8.35pm – 10.15pm)

Today we had our second meet in the lab where we got suggestions from our TA about our project and useful references like links for the project. We had now got an idea on which the project is all about and formulated the features which is to be included in the project. Even then we all had a confusion about

the implementation of our ideas into programs. We distributed our works to gain knowledge of implementation(algorithm for search with different attributes, linking database created using SQL to the C++ program, creating windows for interactions in C++ using graphics in C++). I decided to work on linking database created using SQL to the C++ program.

THURSDAY, 16TH OCTOBER: (11.30pm – 12.00pm)

I did some further analysis on C++programming.com for more information on the SQL and C++ funda. Learnt that databases created in SQL can be included as a library header file in C++ program.

SATURDAY, 18TH OCTOBER: (11.30pm – 2.00am)

I and Sahith formulated the software requirement specification of the project by having a look at the professional SRS format in the internet.

SUNDAY, 19TH OCTOBER: (4.00pm – 11.00pm)

I and my team finalized the SRS documentation, user manual, project dairy and project report. We also tried to write some sample code for the project for an initiation.

28 october,November 5,16,21,22,23,24

TUESDAY, 28TH OCTOBER: (10.00pm – 11.30pm)

I and my team started to work on the code in three different groups. I decided to work on preparing the searching algorithm which was better when compared to the in built functions in the compiler such as the strstr function to minimize the number of checks for the matching of strings.

WEDNESDAY, 29TH OCTOBER: (08.30pm – 10.00pm)

 I learnt about ergonomics/ human factors in wikipedia while coming across the algorithms which are used for matching strings(human friendly nature).
GUI-Graphical User Interface. This was one topic which I learnt when I was reading dealing with databases to make it user friendly.
Different searching algorithms in C++ - pattern searching which I searched on google from which I got some good websites for reference.
I also thought of using Lucene which is also associated with java is a tool which can be used for indexing the text phrases in the file and the keywords so that searching would be an easy job but it was an external software other than the C++ program to accomplish, so I dropped that idea. Did a search on algorithms for searching text in database - which contains a stack overflow document related to the Lucene and related answers.

THURSDAY, 30TH OCTOBER: (11.00pm – 12.30pm)

Today I just went again through the internet browsing to learn something in detail of the algorithms which I saw in the lab sessions and learnt about a new concept called hashing. Since the code involved an unknown concept I decided to write the code separately for this newly written hashing function as it involves modification of the entire code.

SUNDAY, 16TH NOVEMBER: (2.00pm – 4.00pm)

This is the first meet after the endsems got over. We discussed about the different ideas which we had on our project on the coding part of it. Gangesh decided to work on the graphics part of our project. Sahith and Shrey decided to make the layout of the Library Manager that is the construction of the classes and file operations. I continued with my algorithm for search part of the coding with some part of the layout.

MONDAY, 17TH NOVEMBER: (2.00PM – 4.00PM AND 6.00PM – 8.00PM AND 9.00PM – 11.00PM)

Today I learnt in depth about hashing the text given and read some articles on how hashing has to be used in C++ programs.

After the afternoon slot I also came across the parsing function which involved vectors (containers) and string (classes) which had to be included in the program to be written.

I tried linking the functions hashing and parsing.

TUESDAY, 18TH NOVEMBER: (2.00PM – 5.00PM AND 7.00PM – 9.00PM AND 11.00PM – 12.00PM)

Today I tried to understand the logic behind Rabin-Karp algorithm which is a very common and popular algorithm used for comparing the strings in counter to the Naïve algorithm which involves hashing.

The code involved modular arithmetic and determination of the prime numbers which are used in the program for hashing the text. These prime numbers were no given in detail how to be found but I did find out the reason behind them to be prime and range of them.

For optimization of the program there was no time as it would simply involve calculating the primes with respect to the no of letters read in each text.

WEDNESDAY, 19TH NOVEMBER: (2.00PM – 4.00PM AND 10.00PM – 1.00AM)

Today I started writing my main program starting from the templates given by Sahith to me in which changes had to be made according to the searching requirements. I also included the claiming function for the program.

THURSDAY, 20TH NOVEMBER: (6.00PM – 7.15PM AND 10.00PM – 12.00PM)

I wanted to check whether my code written for searching was correct but did not get a chance since the whole of the program it was dependant on. I tried to finish writing it as fast as possible.

FRIDAY, 21ST NOVEMBER: (9.00PM – 10.30PM SHREY'S ROOM)

Today we discussed about the graphics which has to be added to the program. But it didn't seem to work good as in both simple cpp and graphics.h we found it's implementation to our program to be devoid of some properties we expected it to have like having two windows.

SATURDAY, 22ND NOVEMBER: (1.00PM – 3.00PM AND 5.30PM – 9.00PM)

Today we started debugging our code and also implanted some features which were not present in the program initially.

MONDAY, 24TH NOVEMBER: (ALL DAY)

Today we found the bugs in the program and corrected them. All of the code worked except the searching part(which I don't know why it is wrong (compiler does not complain but still the result obtained after searching comes out to be wrong).