

“LEADING UNIVERSITY ESSENTIAL”

BY

INCOGNITO CODERS

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This Report Presented in Partial Fulfillment of the Requirements for the
Sessional Course (Computer Programming Sessional, CSE – 1214)

Supervised By

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**LEADING UNIVERSITY
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APPROVAL

This Project titled “LU Essential”, submitted by “Incognito Coders” consists of Sajid Abdullah Al-hafiz, Khadiza Akther, Touhid Hasan Badhon, Humayra Kabir Nisa and Iftekhar Ahmed to the Department of Computer Science and Engineering (CSE), Leading University, has been accepted as satisfactory for the partial fulfillment of the requirements for the course code: “CSE-1214”, course title: “Computer Programming Sessional” and approved as to its style and contents. The presentation has been held on 9, September 2020.

BOARD OF EXAMINERS

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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Md Saidur Rahman Kohinoor**, Faculty of Modern Science, Department of CSE Leading University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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I also Thank the monitor of our project Hridoy Chowdhury brother for monitoring our team with good advice and help.

I thank our team members for working together to make it complete, and for working hard on time. This Project couldn't be complete without the effort and cooperation of our team members.

ABSTRACT

The “**LU Essential**” is demonstrate with the intention to help the students of Leading University. We developed two features for our varsity students. one is guiding the student and give them better understanding of LU bus routes and other is to assist them in tracking results of crocuses.

TABLE OF CONTENTS

CONTENTS	PAGE
Approval	i
Declaration	ii
Acknowledgements	iii
Abstract	iv
Table of Contents	v
List of Figures	vi
CHAPTER	
Chapter 1: Introduction	8
1.1 Introduction	
1.2 Motivation	
1.3 Objectives	
Chapter 2: Background	9
2.1 Project Planning	
2.2 Relevant study & findings	
2.3 Challenges	
Chapter 3: Requirement Specification	10-11
3.1 Requirement Collection and Analysis	
Logical Data Model/Flowchart/Pseudocode	
Chapter 4: Implementation and Testing	12-15
4.1 Implementation of Database (file)	12
4.2 Testing Implementation (output analysis)	12-15
Chapter 5: Time Plan and Team Work	16-18
5.1 Work Distribution	16
5.2 Individual Contribution	16
5.2 Miscellaneous	18
Chapter 6: Conclusion and Future Scope	19
6.1 Learning and Conclusion	19
6.2 Scope for Further Developments	19
REFERENCES	20

LIST OF FIGURES

FIGURES	PAGENO
Beginning of Project	12
Registration	13
Log In	13
Profile	14
Services	14
CHOLO Leading University	14
Tracking Result	15

CHAPTER 1

INTRODUCTION

1.1 Introduction

The **Leading University Essential (LU Essential)** is a program which based on the Leading University website information. We invent some new features to assist university students. LU Essential will provide some information of our university; it'll provides two types of assistance for the students. One is to ease their traveling matters from any route to Leading University and its exact time schedule and other is to track the CGPA of completed and incomplete semesters. Hopefully LU Essential will play important role for basic information.

1.2 Motivation

The “**LU Essential**” is demonstrate with the intention to help the students of Leading University. Our project is not only to ease the pain of distance from any route to Leading University but also will help the students to know how to go, which route to go, at what time the bus will be available etc. and also to track their courses grade's, GPA, CGPA and create registration in every semester.

1.3 Objectives

Teaching and learning process has been modified from lecture-based learning to be more interesting and motivating learning environment with the use of modern technologies and variety of technological tools. Our code is developed with the intention to help users of this program to keep track of the distance and other registration related things.

Goals

1. It'll assist in basic information.
2. To provides better understand of LU bus routes.
3. Maintaining time with the help of bus schedule.
4. To assist the students to track their desire Course Grade's, GPA and CGPA of specific course and semesters.
5. To provides better understand about registration/login for any purposes.

CHAPTER 2

BACKGROUND

2.1 Project Planning

Generating Idea

At first, when we talked about project ideas with our team mates, there appears miscellaneous ideas like Scientific Calculator, Snake game, Stop Watch, Calculating Desire CGPA and Traveling aid of LU routes same as UBER/PATHAO app.

After all, we decided to develop a project on Traveling aid of LU Routes and Predicting Results by calculating Course Grade's, GPA and CGPA.

First, we planned to collect information for Traveling aid of LU. We named that part as "CHOLO LU". We gather info of the four routes of Leading University from google map. Our target was finding minimum distance and time from any location of any of four routes to LU. Second, we learned how to calculate GPA and CGPA. At last, we convert those knowledge's into code and shaped the project.

2.2 Relevant study & findings

We searched for many things and learned to make our project interesting and decorate the User Interface (UI) and tried to give a descent outlook. Here're few questions that asked for betterment of the project.

- a. How to calculate GPA & CGPA and what is the differences?
- b. How to animate characters in C?
- c. How to change foreground and background color?
- d. How to control multiple files under one project?

2.3 Challenges

The most challenging part was assembling the whole project and debugging the errors. I did not learn how to divide a project into smaller parts before doing this project. So it seemed difficult to share the project and explain the work to the teammates.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Requirement Collection and Analysis

Logical Data Model/Flowchart/Pseudocode

Character Animation

Pseudocode:

- Storing a string in a character array.
- Create a loop to continue for million or required times and close.
- Create another loop to print the stored string character by character.

Code in code::blocks IDE:

```
int x;  
double y;  
char text [] = "CHARACTER ANIMATION";  
  
for (x = 0; text[x] != '\0'; x++)  
{  
    print ("%c", text[x]);  
    for (y = 0; y <= 99999999; y++)  
    {  
    }  
}
```

Registration

Pseudocode:

- Open a file in append mode.
- If file is NULL, which means file doesn't exist.
- Store data to the opened file.
- Close file.

Log In

- The first part is the actual login from which user fills out and kicks off the login process.
- The second is the login mechanism which will take the submitted username and password, find the user's password in the database and compare their password on file to the one they provided as part of the login.
- The third part is then checking a user on each restricted page to see if they have successfully
- logged in.
- Lastly, we need a mechanism for destroying that user's state and basically causing them to go
- and login again. (logout)

Profile

Pseudocode:

- Open the exist file in reading mode.
- Read data from the file.
- Print those data on the screen.
- Close the file.

GPA

- Read Total course number form user.
- For every course need to input credit hour & credit point.
- Multiply credit point with credit hour & store into weighted point.
- Calculate the Sum of total credit.
- Divide the weighted point by total credit.
- Print the result.

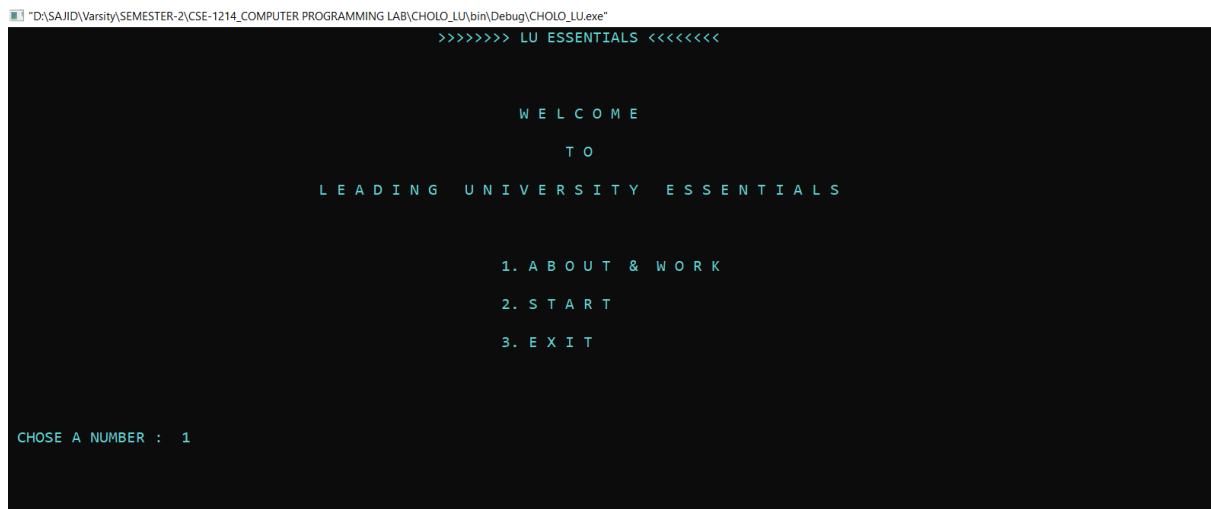
CHAPTER 4

IMPLEMENTATION AND TESTING

4.1 Implementation of Database (file)

FILE is used for the purpose of collecting and storing data in to the system so that the stored data can be reused in other work. Here, we used FILE for the same purpose. At first a Text file was created which contain the Name, ID, E-mail, Password etc. some personal data of a student. Which helps students to make their own profile.

4.2 Testing Implementation (output analysis)



```
"D:\SAJID\Varsity\SEMESTER-2\CSE-1214_COMPUTER PROGRAMMING LAB\CHOLO_LU\bin\Debug\CHOLO_LU.exe"
>>>>>>> LU ESSENTIALS <<<<<<<<

      W E L C O M E
        T O
    L E A D I N G   U N I V E R S I T Y   E S S E N T I A L S

      1. A B O U T   &   W O R K
      2. S T A R T
      3. E X I T

CHOSE A NUMBER : 1
```

FIGURE - 4.1 : Beginning part of the project.

"D:\SAJID\Varsity\SEMESTER-2\CSE-1214_COMPUTER PROGRAMMING LAB\CHOLO_LU\bin\Debug\CHOLO_LU.exe"

```

                                R E G I S T R A T I O N

                                # PERSONAL INFORMATIONS :-

                                F I R S T   N A M E : Sajid

                                L A S T   N A M E   : Abdullah

                                G E N D E R       : Male

                                E - M A I L       : sajid99@gmail.com

                                P H O N E         : 01xxxxxxxxxx

                                S T U D E N T   I D : 2012020308

                                # SECURITY INFORMATIONS :-

                                U S E R   I D     : sajid99

                                P A S S W O R D   : Bre@k8

YOUR REGISTRATION IS SUCCESSFULLY COMPLETED. :)
PRESS '1' TO LOGIN : 1

```

FIGURE - 4.2 : Registration completion.

"D:\SAJID\Varsity\SEMESTER-2\CSE-1214_COMPUTER PROGRAMMING LAB\CHOLO_LU\bin\Debug\CHOLO_LU.exe"

```

                                L O G I N

                                U S E R   I D     : Sajid99

                                P A S S W O R D   : Bre@k8

LOGIN SUCCESSFULL. :)
PRESS [ENTER] TO SEE YOUR PROFILE :)

```

FIGURE - 4.3 : Log In.

"D:\SAJID\Varsity\SEMESTER-2\CSE-1214_COMPUTER PROGRAMMING LAB\CHOLO_LU\bin\Debug\CHOLO_LU.exe"

```

                                P R O F I L E

                                U S E R   I D       : Sajid99
                                P A S S W O R D     : Bre@k8
                                N A M E              : Sajid Abdullah
                                G E N D E R          : Male
                                E - M A I L          : sajid.alhafiz@gmail.01722100839
                                P H O N E            : 01722100839
                                S T U D E N T   I D  : 2012020308

PRESS [ENTER] AND ENJOY OUR SERVICEES. :)
```

FIGURE - 4.4 : Profile.

"D:\SAJID\Varsity\SEMESTER-2\CSE-1214_COMPUTER PROGRAMMING LAB\CHOLO_LU\bin\Debug\CHOLO_LU.exe"

```

                                S E R V I C E S

                                1. TRAVEL TO LEADING UNIVERSITY
                                2. TRACKING RESULT

PRESS '0' TO LOGOUT.
ENTER YOUR CHOICE : 1
```

FIGURE - 4.5 : Services of the project.

"D:\SAJID\Varsity\SEMESTER-2\CSE-1214_COMPUTER PROGRAMMING LAB\CHOLO_LU\bin\Debug\CHOLO_LU.exe"

```

                                C H O L O   L E A D I N G   U N I V E R S I T Y

                                1. BUS   SCHEDULE
                                2. DEPARTURE EASE FOR TRAVELING
                                   LEADING UNIVERSITY

PRESS '0' TO GO BACK.
ENTER YOUR CHOICE :
```

FIGURE - 4.6 : First part of services list, CHOLO LU.

"D:\SAJID\Varsity\SEMESTER-2\CSE-1214_COMPUTER PROGRAMMING LAB\CHOLO_LU\bin\Debug\CHOLO_LU.exe"

T R A C K I N G R E S U L T S

1. TRACKING GRADE OF COURSE(S).
2. TRACKING GPA OF SEMESTER(S).
3. TRACKING CGPA.

PRESS '0' TO GO BACK.

ENTER YOUR CHOICE : 1

FIGURE - 4.7 : Second part of services list, Tracking Result.

CHAPTER 5

TIME PLANE AND TEAM WORK

5.1 Work Distribution

First I divided our project into smaller parts and distribute the task among the team members considering the difficulty of the work and the skills of the members. Here, I'm trying to show the layout of the project tasks below.

<u>LU ESSENTIAL</u>		
USER INFO	TRAVEL TO LU	TRACKING CGPA
REGISTRATION LOGIN PROFILE	BUS SHEDULE LIST OF BUS STOPPAGES BUS ROUTES ROUTE-1 ROUTE-2 ROUTE-3 ROUTE-4	GRADE COURSE GRADE GPA CGPA

5.2 Individual Contribution

Sajid Abdullah Al-hafiz

As a team leader, I was responsible for managing the whole project. I had to lay out the project task and assign each task to my teammate. Collecting, editing and evaluating their works was part of my duty. I had to debug some of their code and make it smooth and more optimized for the project. Many of the time I had to give Logical support to my teammates.

Assembling the whole project, designing and implementing was work of mine. Where I had animated characters, changed the color of foreground and background, aligning contents to the center and make it more dynamic. I also created the profile function which contain the information of the registered user.

Humayra Kabir Nisa

She created the Registration function. For which, the function asks user to provide their personal and security information in detailed. These data will store in a file so that program can reuse the data for Log In purpose.

She was also given the task to collect collected the minimum distance and amount of time intended to ease the complexity of traveling to LU from each stoppages of Bus Route-1.

Khadiza Akther

She attached LU's regular bus schedule and collected the minimum distance and amount of time intended to ease the complexity of traveling to LU from each stoppages of Bus Route-2.

Regular Bus schedule shows the departure and return time of the number of Bus of each routes. When user chose option to see the bus schedule, it will display route wise detailed information.

She also assisted me in recorrecting, designing and analyzing the project report.

Touhid Hasan Badhon

He was given the task to create the Log In function. When User completed the registration, he become able to Log In. Firstly, Log In function will ask the user to give the correct UserID and Password to enter in his account. After that, the function matches the newly given UserID and Password with earlier given UserID and Password from the file which was created in the registration section. If UserID and Password matches user can successfully log in.

He collected the minimum distance and amount of time intended to ease the complexity of traveling to LU from each stoppages of Bus Route-3 and he has written the Abstract of our project report.

Iftekhar Ahmed

He was created the CGPA Tracking Calculator. This tracking result function has four parts.

1. Grade
2. Tracking Course Grade
3. Tracking GPA
4. Tracking CGPA

Grade part is used to convert the float value to a grade. The Course Grade, GPA and CGPA tracking function has similar type of calculation. If user choose the Tracking Course Grade option, it will ask him the marks of exam's, assignment's, tutorial's etc.

He collected the minimum distance and amount of time intended to ease the complexity of traveling to LU from each stoppages of Bus Route-4.

5.3 Miscellaneous

Iftekhar Ahmed & Sajid Abdullah Al-hafiz

We worked together to implement the CGPA Tracking Calculator. At first, we learn that how to calculate GPA and CGPA. Then we find a video of an application named "Grade Expert" which motivated us develop and invent The CGPA Tracking Calculator same as the app.

Whole code of the functions under CGPA Tracking Calculator was created by Iftekhar Ahmed in C++ programming language with my cooperation. I converted the codes in C programming language. I made it dynamic, smooth and more optimized for the project.

CHAPTER 6

CONCLUSION & FUTURE SCOPE

6.1 Learning and Conclusion

Our project was started with the intention to invent some new features in the Leading University website. Therefore, we generated ideas and implemented in the project. We had to learn a lot of new things to complete the project. A project completion is not possible without the cooperation of teammates.

6.2 Scope for Further Developments

I think there're two types of scope for further development in our project. These are –

1. **Canceling Registration**

We have been able to create a personal profile by registering students in our project. But I failed to give them the freedom to cancel the registration.

2. **Tracing Desire CGPA**

By measuring the desired CGPA of our semester or the desired GPA of a particular course, we can get an idea that it is possible to get the desired grade by getting the minimum number of marks in a subject.

REFERENCES

Grade/GPA/CGPA calculating Idea

<https://www.youtube.com/watch?v=ycgyXnCb7II>

Character animation

<https://steemit.com/utopian-io/@cuthamza/steps-to-create-animated-text-in-c-programming-language>

Multiple File Handling

<https://www.youtube.com/watch?v=rpipDcG8GMg>

File Handling

<https://www.programiz.com/c-programming/c-file-input-output>

Coloring

<https://www.youtube.com/watch?v=IOHhUDDZaRk>