

# **Computer Programming – Lab**

BSCS [1A]

## **FINAL TERM PROJECT REPORT**



**Submitted By [Group No. 6]:**

- Burhan Hadi Butt (Leader)
- Hafiz Abdul Haseeb Malik
- Hashim Maqbool
- Maysam Hussain Ali
- Muhammad Ali Ehtisham

**Submitted to:** Zupash Awais

### **PROJECT NAME**

Islamic Calendar

**DEPARTMENT OF COMPUTER SCIENCES  
BAHRIA UNIVERSITY, LAHORE CAMPUS**

## Table of Contents

1.	Marks Distribution .....	3
2.	Abstract .....	4
3.	Introduction .....	5
4.	Problem Statement .....	5
5.	Objectives .....	5
6.	Methodology .....	5
7.	Results .....	6
8.	Code .....	8
9.	References .....	8

## Marks Distribution

----- **For Instructor Use Only** -----

Project Grading Sheet				
Sr. No.	Task	Max Marks	Obtained Marks	Comments( <i>if any</i> )
1.	Report	05		
2.	Implementation	10		
3.	Viva	15		
Total		30		Signature:

-----

----- **Instructions** -----

### 1. Follow the below given steps to design your report :

- Font Style : Times New Roman
- Font Size : First Heading (14 pts), Sub Headings (12 pts), Normal Text (12pts)
- Justify you normal text under each heading

### 2. Deadline of the project : 1st June, 2021 – 11:00AM (LMS)

(11 :30PM Viva – On Campus)

-----

## **Abstract**

Our project was to create the Islamic Hijri Calendar. This project required us the implementation of all the basics and advanced concepts of C++ programming. This Islamic Hijri Calendar was created and compiled on Microsoft Visual Studio 2019. The main need of this project was the assessment of C++ skills of that students that were learnt during the spring 2021 semester. Many problems were faced by the group during the coding process, but we easily manage resolve those problems by research and with this research group members came to know about many more things in C++ programming. The code is efficient to use and when it is executed/build it is also easy for a user to explore the Islamic calendar. Further if we talk about its use in industry, it's use is still very limited since much more reliable and portable options are available.

## **1. Introduction**

This is an Islamic Hijri calendar. This Calendar has two parts, one is administrator which has default admin members and other one is user which are those who can register themselves to the application. Calendar can show all the events of Islamic history as well as some minor details about these events. Furthermore, it can display the logged in user birthday. This calendar also gives wide range of choices to its user like which month or year he/she wants to see and even if a user selects the wrong month, he/she can maneuver between the calendar to see the page of desired month. Multiple users can create account and it will store all the information of a particular student in a text file with naming it to the account owner. The following program also limits the user to only 3 tries of typing correct username/password.

## **2. Problem Statement**

Some of the problem statements that were encountered by us during the process of writing and executing code are as following:

- When new username is registered a file is created on backend with the help of file handling. Later, when that registered user logged in and wanted his/her birthday to be displayed on the calendar, a problem came that how to display his/her date of birth i.e., how to call or display his/her date of birth only, on console, while his information is stored in different data types.
- How to display a proper grid for the calendar.
- How to restrict user to only 3 login user attempts.
- To display the dates accordingly with the synchronization of days.
- Database creation of admin panel i.e., creation of admin users and their passwords.

## **3. Objectives**

- How to create a user login panel in C++ program.
- How to convert one datatype to another.
- How to call different functions at same time similarly how to pass different functions at same time.
- How to create the graphical representation of project.
- Better way of implementation of all the basic and advanced concepts of C++ language.
- Using and learning about different header files such as <window.h>, <sstream>, <conio.h> etc.
- How to apply UX and UI in the project.
- What is goto statement and how to apply it.
- How to write a complex and efficient code while working as a team.

## **4. Methodology**

We used different methodologies to tackle the problems we faced during the completion of this project. We used loops to display numbers and if else statements to control the decisions in addition to this some functions required case break. Further if we talk about, we can discuss the solution of main problem which was the display of date of birth of user and

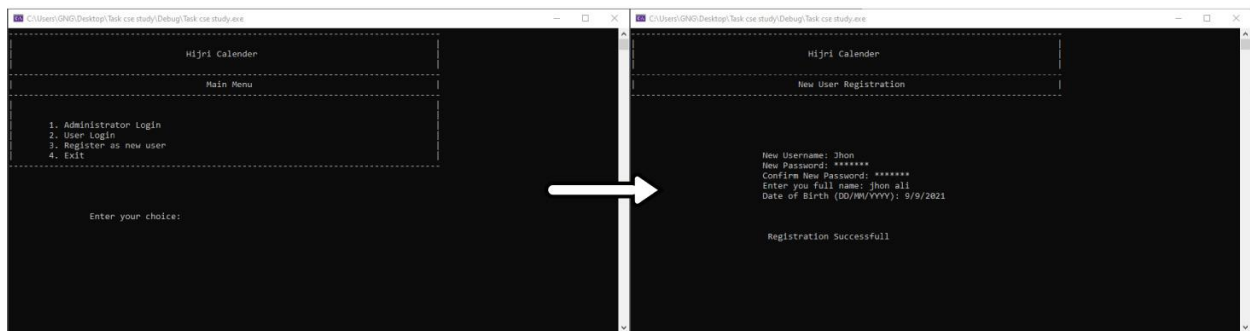
conversion of datatypes and in this we use a library called sstream. We also used iomanip library to create good visuals of calendar. Other than these major problems we also dealt with some minor problems which were resolved with some of the logical thinking and basic concepts of C++. For the display of days and dates we took the help of case break, for loops and goto statements. The database of admin panel was built using structures and arrays it was quite tricky but easy as 1D array is used. This login was passed in a function where login username and password were checked using if else further another function also helped in controlling the login spamming. Another big problem was to write an efficient code and this was done with fstream library which include ifstream and ofstream both are best for writing a short and efficient code. These were the problems we faced during the code compilation and debugging but we managed to complete the project with some research, teamwork and basic C++ skills.

## 5. Results

# FROM ADMIN LOGIN

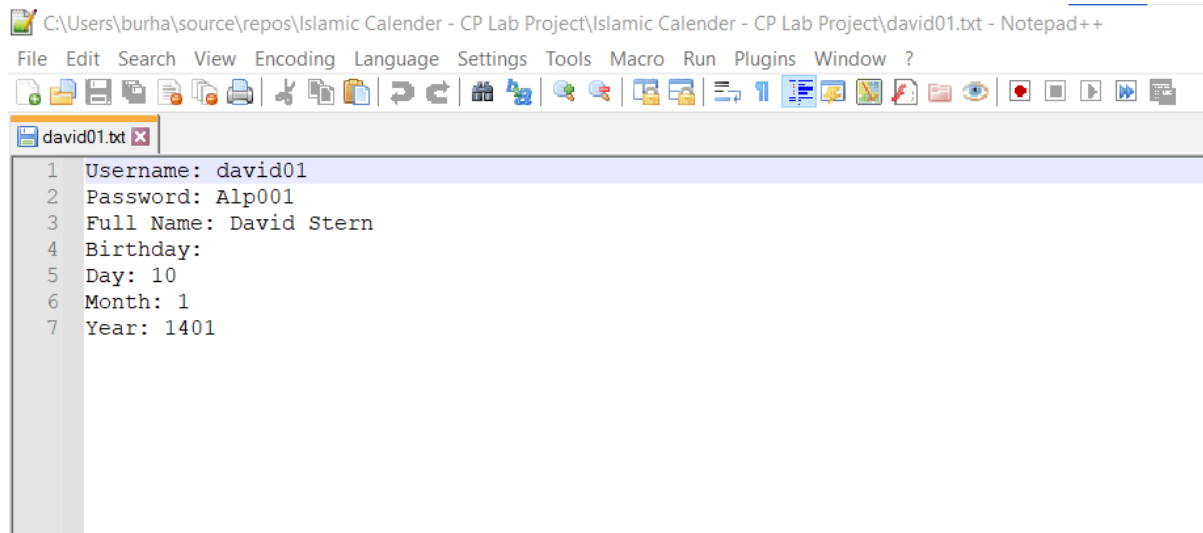


# REGISTERING NEW USER



# USER LOGIN WITH REGISTERED DETAILS





The screenshot shows a Notepad++ window with the title bar "C:\Users\burha\source\repos\Islamic Calender - CP Lab Project\Islamic Calender - CP Lab Project\david01.txt - Notepad++". The menu bar includes File, Edit, Search, View, Encoding, Language, Settings, Tools, Macro, Run, Plugins, Window, and ?. The toolbar contains various icons for file operations. The text area shows the following content:

```
1 Username: david01
2 Password: Alp001
3 Full Name: David Stern
4 Birthday:
5 Day: 10
6 Month: 1
7 Year: 1401
```

## 6. Code

Uploaded on LMS

## 7. References

We took help from these links:

- <https://stackoverflow.com/questions/33588266/how-to-save-txt-file-in-c>
- <http://www.cplusplus.com/forum/general/3570/>

These YouTube videos also helped us:

- [https://www.youtube.com/watch?v=aMqfaHIA8\\_k](https://www.youtube.com/watch?v=aMqfaHIA8_k)
- <https://www.youtube.com/watch?v=4E59FvBzoZY>
- <https://www.youtube.com/watch?v=BqnXcsZ7-6w&t=78s>