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UNIT CONVERTER SYSTEM

Submitted in partial fulfillment of the requirements of software development,
project 1 for the B.Sc. Engineering in CSE.

SUPERVISED BY

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UNIT CONVERTER SYSTEM

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DECLARATION OF AUTHORSHIP

We, Aktaruzzaman, Abdullah Ibn Bellah, Bikash Chandra Ray, Md Najmul Parves and Sagar Saha declare that:

- This project is titled, "**Unit Converter System**" and the work presented in it is our own.
- We confirm that: This work was done entirely while in candidature for a B.Sc. Engineering in CSE degree at Bangladesh University of Business and Technology.
- We own every single part of this Software.

CERTIFICATE

This is to certify that the project entitled, "**Unit Converter System**" submitted by Aktaruzzaman, Abdullah Ibn Bellah, Bikash Chandra Ray, Md Najmul Parves and Sagar Saha. ID respectively: 21222203031, 21222203044, 21222203045, 21222203005, 21222203029 in partial fulfillment of embodies and their requirements work under my supervision.

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ABSTRACT

Unit Converter System is a system or project where we have solved a couple of problems in our real life. Here we created some features through those features we can make our life easier. Unit Converter is a quick, easy and powerful tool for converting various measurement units. Our Unit converter System can convert different units of measure viz. Mass, Length, Temperature, Number System, and Time.

APPROVAL

This project "**Unit Converter System**" was submitted by Aktaruzzaman, Abdullah Ibn Bellah, Bikash Chandra Ray, Md Najmul Parves and Sagar Saha. ID respectively: 21222203031, 21222203044, 21222203045, 21222203005, 21222203029, Department of Computer Science and Engineering (CSE), Bangladesh University of Business and Technology (BUBT) under the supervision of Md. Saddam Hossain; Assistant Professor, Department of C.S.E has been accepted as satisfactory for the partial fulfillment of the requirement for the degree of Bachelor of Science (B.Sc. Engineering) in Computer Science and Engineering and approved as to its style and contents.

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CHAPTER 1

INTRODUCTION

1.1 Project Aim:

The aim of this **UNIT CONVERTER SYSTEM** project is to develop a user-friendly and efficient unit converter system that can convert various measurements, including mass, length, temperature, number system, and time. The system should provide accurate and precise conversions.

1.2 Project Objectives:

- To develop a console application that allows users to input different units and quantities and get accurate and precise conversions in real-time.
- To provide conversions for multiple units within each category, such as meter, kilometer, Foot, Inch, Centimeter and pounds for length, or kg, gram, ton, pound and carat for Mass.
- To implement conversion formulas that provide accurate and precise results for all supported units and quantities.
- To create a user-friendly interface that is easy to navigate and allows users to quickly find and select the desired units and quantities.
- To include error handling and input validation to ensure that the system can handle invalid input and prevent errors.
- To test the system thoroughly and ensure that it meets the accuracy and precision requirements for all supported units and quantities.
- To provide documentation and user manuals to assist users with using the unit converter system effectively.

1.3 Development Environment:

This below table will show the configuration of the development environment used to create this Software.

<i>Processor</i>	Core i7 7 th Generation
<i>Operating System</i>	Windows 10
<i>Memory</i>	8 GB
<i>Storage</i>	1 TB
<i>IDE</i>	Visual Studio Code
<i>Compiler</i>	GCC 12.2.0

CHAPTER 2

SYSTEM ANALYSIS

2.1 System Requirement and Specification

In order to run this software, we are going to need a GNU & GCC compiler.

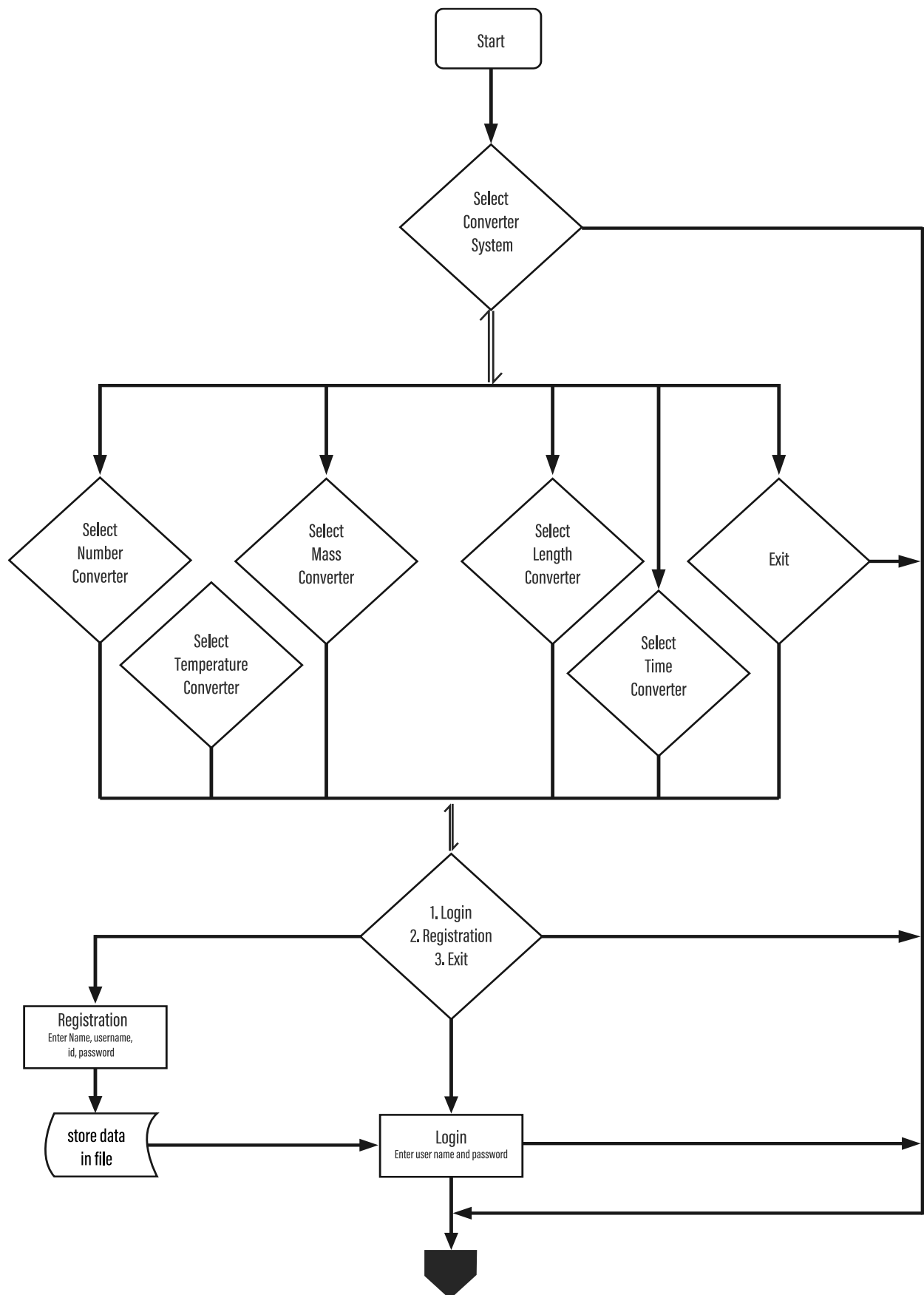
2.2 Existing VS Proposal

The proposed system is intended to make life easy. The main purpose of the projects to build software that makes everything easy. It's is so simple to use and various important task like covert meter, kilometer, Foot, Inch, Centimeter and pounds for length, or kg, gram, ton, pound and carat for Mass etc.

The Unit Converter App is a versatile and powerful console application that can help users convert various measurements accurately and efficiently. The app will provide a user-friendly interface, customization options, and robust error handling and input validation features, making it easy to use and reliable. With its fast performance, accuracy, and precision, the Universal Unit Converter App can become a valuable tool for anyone in need of a unit converter app.

2.3 Software Tool Used

<i>Code Editor</i>	<i>Visual Studio Code.</i>
<i>Programming language</i>	<i>C++</i>
<i>Compiler</i>	<i>GCC 12.2.0</i>



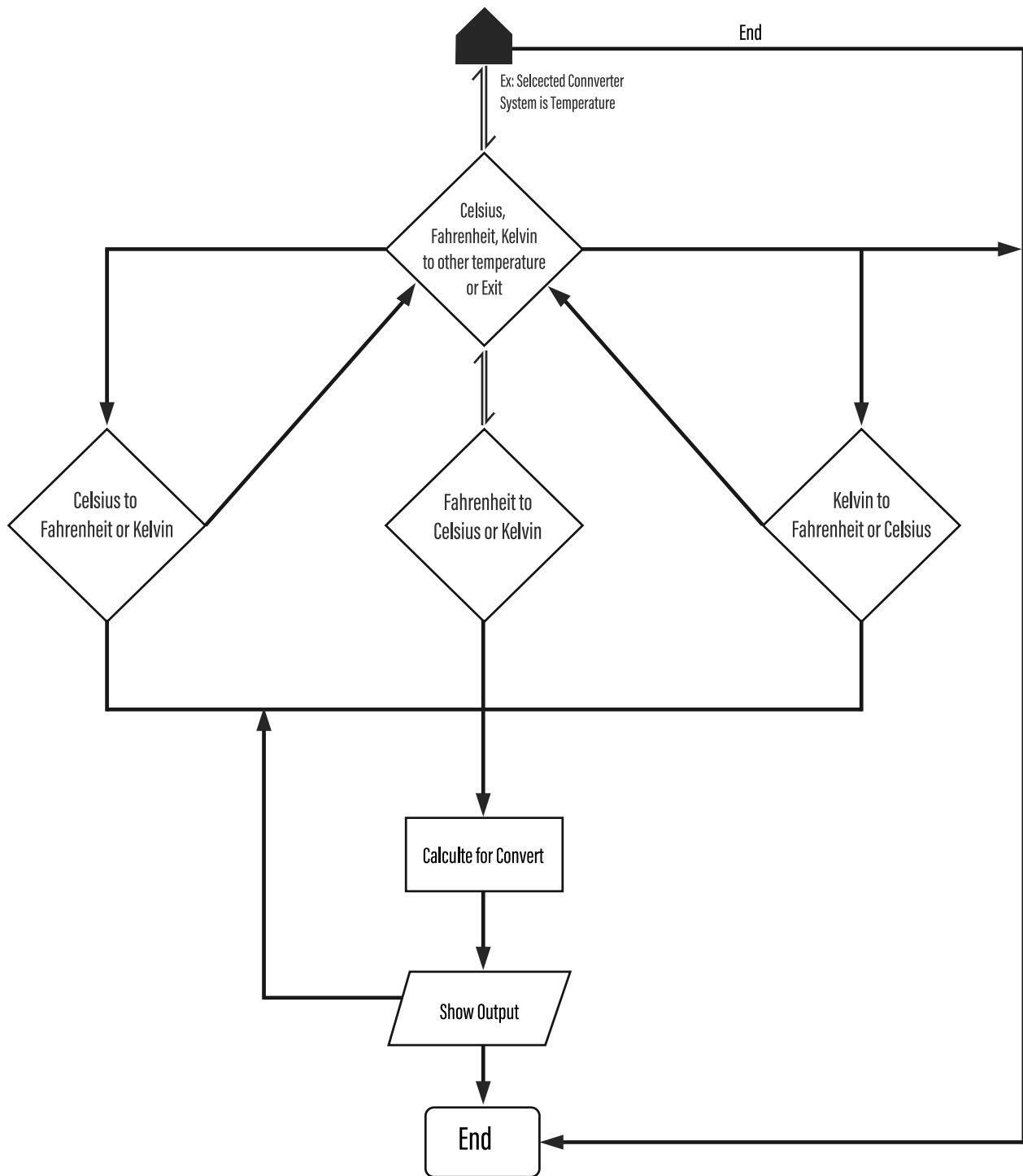


FIGURE: FLOWCHART

CHAPTER 3

USER INTERFACE

Home Page:

```
*==*==*==*==*==*==*==*==*==*
*  UNIT CONVERTER SYSTEM  *
*==*==*==*==*==*==*==*==*==*
```

```
-----
Please Select Your Converter Option
-----
```

■ MENU

- ° Number Conversion For Select : 1
- ° Time Conversion For Select : 2
- ° Length Conversion For Select : 3
- ° Mass Conversion For Select : 4
- ° Temperature Conversion For Select : 5
- ° Exit For Select : 6

Enter Menu Number: 2

User Registration and Login Option:

```
*==*==*==*==*==*==*==*==*==*
*  UNIT CONVERTER SYSTEM  *
*==*==*==*==*==*==*==*==*==*
```

Choose an option

■ MENU

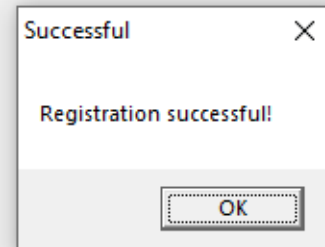
- ° Register For Select : 1
- ° Login For Select : 2
- ° Main Menu For Select : 3
- ° Quit For Select : 4

Input Your Option: 1

Registration Page

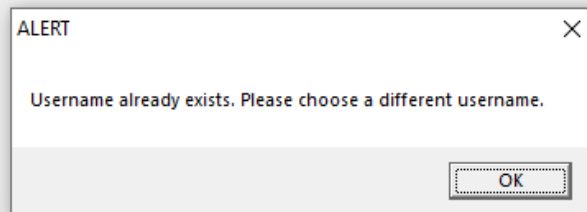
====*==*==*==*==*==*==*==*
 === REGISTRATION ==*==*
 ====*==*==*==*==*==*==*==*

```
Enter a username : Anonymous Coder
Enter your name  : coder
Enter your ID    : 21223453432
Enter a password : ****
Confirm password : ****
```



_
*_**_*_ REGISTRATION *_**_*_
*_**_*

```
Enter a username : coder
Enter your name  : aktar
Enter your ID    : asdasf
Enter a password : ****
Confirm password : ****
```

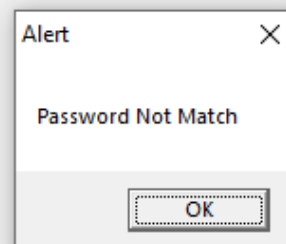


```

*==*==*==*==*==*==*==*==*==*==*==*==*
*==*== REGISTRATION ==*==*
*==*==*==*==*==*==*==*==*==*==*==*

```

```
Enter a username : new_coder
Enter your name  : Coder
Enter your ID    : 12132
Enter a password : ****
Confirm password : *****
```



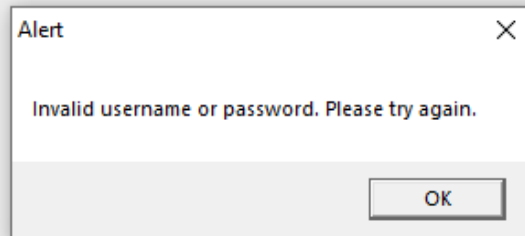
Login Page

```
*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*
```

```
*_*_*_*_*_*   LOG IN   *_*_*_*_*_*
```

```
*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*
```

```
Enter your username: coder
Enter your password: *****
```



```

**==**==**==**==**==**==**==**==**==**
**==**==**== LOG IN **==**==**==
**==**==**==**==**==**==**==**==**==**

```

```
Enter your username: coder
Enter your password: ****
```



Time Conversion

```
*****
* UNIT CONVERTER SYSTEM *
*****
```

■ MENU

- ° Day Conversion For Select : 1
- ° Hours Conversion For Select : 2
- ° Minute Conversion For Select: 3
- ° Second Conversion For Select: 4
- ° Main Menu For Select : 5
- ° Exit For Select : 6

Enter Menu Number: 4

```
*****
* UNIT CONVERTER SYSTEM *
*****
```

Enter Your Seconds: 940002

```
*****
* UNIT CONVERTER SYSTEM *
*****
```

■ MENU

- ° Seconds To Minute For Select: 1
- ° Seconds to Hour For Select : 2
- ° Seconds to Day For Select : 3
- ° Back For Select : 4
- ° Exit For Select : 5

Enter Menu Number: 3

Output:

```
*==*==*==*==*==*==*
*==*==* Output *==*
*==*==*==*==*==*==*
```

Day of 940002 Seconds is 10 Days, 21 Hours, 6 Minutes, 42 Second

■ MENU

- Input Again For Select : 1
- Seconds Conversion Menu For Select: 2
- Main Menu For Select : 3
- Exit For Select : 4

Enter Menu Number:

Exit From App:

```
*==*==*==*==*==*==*
*==*==* Output *==*
*==*==*==*==*==*==*
```

Day of 940002 Seconds is 10 Days, 21 Hours, 6 Minutes, 42 Second

■ MENU

- Input Again For Select : 1
- Seconds Conversion Menu For Select: 2
- Main Menu For Select : 3
- Exit For Select : 4

Enter Menu Number: 4

Press any key to continue . . .

CHAPTER 4

CONCLUSION

Conclusion:

In conclusion, the unit converter console app is a simple yet useful program that enables users to convert different units of measurement easily. The app can handle various types of conversions, such as length, weight, volume, temperature, and time. The program provides users with an intuitive interface, making it easy for anyone to use, even if they are not familiar with programming. The unit converter console app is an excellent tool for educational purposes and can be used by students, researchers, and professionals alike. It is a valuable addition to any developer's toolkit and can be used as a foundation for more complex applications.

Future Work:

- The unit converter console app can be improved in many ways to make it more versatile and powerful. Here are some ideas for future work:
- Adding more conversion types: The app can be extended to handle more conversion types, such as currency, pressure, and energy.
- Adding user-defined conversions: Users can define their conversion types, and the app can provide a template to enter the conversion formula.
- Adding support for multiple languages: The app can be translated into different languages to reach a broader audience.
- Adding a graphical user interface (GUI): The app can be enhanced with a GUI to make it more user-friendly and appealing.
- Adding a history feature: The app can keep track of previous conversions for users to reference later.
- Adding an auto-complete feature: The app can suggest possible conversions as the user types to save time and increase accuracy.
- Overall, the unit converter console app is a great starting point for future development, and there are many ways to improve it further.