

CSC 1103 INTRODUCTION TO PROGRAMMING LAB

Project Idea Pool

Instruction: A group consisting of two students may come up with their own ideas with confirmation of the course instructor or may choose from the project idea pool provided below –

1. Student Record System

The idea of the program is to enter student details such as Student ID, Name, Contact email, phone number, department, program, address etc. Once the basic version is programmed, the program can be extended for course registration such as add/drop courses using class and object in the final term.

2. Grade Conversion

A simple grade conversion that can convert the numerical value to letter grade and grade point. Once the basic part is programmed, it can be extended for grade submission for different courses for students in the final term.

3. Contact Management System

A simple program for storing phone contacts. The user will input the number of contacts he wants to store in the phone book. The output would be the list of the contacts. Once the basic version is programmed, it can be extended to more real-world contact management system in the final term using the concept of OOP.

4. Math Game for Kids

The program will offer a mathematical expression while run, for example, $2+7=?$ and when entered the answer it will check to offer the result! The game will keep continuing until the user selects to exit.

5. Number Conversion: Convert from any base to decimal and vice versa

Given a number and its base, convert it to decimal. The base of number can be anything such that all digits can be represented using 0 to 9 and A to Z. For example, the Value of A is 10, and the value of B is 11 and so on. Students will use functions for implementing this program .It will be implemented using CLASS in the final term.

6. Word Game

The game will ask to write a word using a given letter, and while the word entered the program will check the word and offer the result. E.g., write a 3 letter word which has letter 'c' in it: cat.

7. Program to Find the Areas of Different Geometrical Figures

When students implement it in C++ Program, they will use FUNCTIONS to find the areas of different geometrical figures. The program is menu driven program. This has 4 options that can be chosen by the user. The 4 options are – 1) Area of circle, 2) Area of rectangle, 3) Area of triangle, 4) Area of square. After choosing, the geometric figure user will give corresponding inputs (For example in Circle user have to give the Radius).

8. Simple ATM system

A simple console ATM system for money withdraw, transfer, and mini statement printing. Once the basic version is programmed (in C++), it can be extended for real-world ATM system using the concept of OOP.

9. Employee Management System

A simple employee management system for adding employee details. Once the basic version is programmed (in C++), it can be extended to a real-world employee management system using OOP.

10. Ticketing System

A simple employee management system for adding employee details. Once the basic version is programmed (in C++), it can be extended to a real-world employee management system in final term.