

Project Proposal

Submission Date: 21st May 2019 (Tuesday)

Group Members: 2-3 students in each group, no single student is allowed

Instructions for submission of project proposal:

1. Every group should have a different project from each other. In order to differentiate between each other. I have listed down few projects, you can select the project from the list, or you can propose your own. ***Once you have selected any project, inform your CR.*** If the proposed project is already taken by someone, CR should inform the group to change the project as it is already taken.
2. **Most importantly**, remember to involve each and every concept in your project, that we have studied in the class or lab.
3. Each group member should have their contribution in a project.
4. Submit the hardcopy containing the **project title** and **project description** having details in 10-15 lines.

List of Projects:

1- Student Management system:

Student Management System project is console-based system, which contains basic functions which include **Add student record, view record, edit record, search record and remove the student record**. While adding the students, the user has to enter all the student related information (like name, registration no., age, program, semester, GPA etc.) to the system. And the user can view all these students lists from the view section. The user can also search through any specific record by registration number.

NOTE: This is just a sample project. You have to add more functionalities to it.

2- Sorting algorithms:

The project should contain different sorting algorithms. **Bubble sort, insertion sort, selection sort, quick sort, merge sort and radix sort**. Make a program that takes the user-defined number of elements in a list. After that the user will be able to select any one of the algorithms to sort the list. (For understanding the concepts of different sorting algorithms, you can take the help from Google)

3- Hangman

The Goal: Despite the name, the actual “hangman” part isn’t necessary. The main goal here is to create a sort of “guess the word” game. The user needs to be able to input letter guesses. A limit should also be set on how many guesses they can use. This means you’ll need a way to grab a word to use for guessing. You will also need functions to check if the user has actually inputted a single letter, to check if the inputted letter is in the hidden word (and if it is, how many times it appears), to print letters, and a counter variable to limit guesses.

Concepts to keep in mind:

- 1- Random
- 2- Variables
- 3- Boolean
- 4- Input and Output
- 5- Integer
- 6- Char
- 7- String
- 8- Length
- 9- Print

4- Hospital Management System:

Features :

1. Login Systems (Patients/Admin/Doctor)
2. Book Appointment
3. Manage Patients, Doctors
4. Add Doctor Specialization

NOTE: This is just a sample project. You have to add more functionalities to it. Also, there should be functions for **adding record, viewing records, searching any specific record, deleting record and editing record.**

5- Scientific Calculator:

As the name shows, the calculator should have all the functionalities present in a modern scientific calculator. It should also store history record of calculations.

NOTE: Please take a look at latest scientific calculator and start developing your system accordingly.

6- Ludo Game:

This is a simple console-based strategy board game which is very easy to understand and use. Talking about the gameplay, all the playing rules are the same just like we play in real time ludo. Here at first, the user has to select players i.e. either human or computer. After selecting human, the player has to enter details such as name and select color (red, green, yellow and blue). the player can also start the game within two players if he/she wants.

After starting the game, a console based ludo board appears, other rules are the same. First, the computer or the player has to roll the dice. The main thing in this console-based game is that the player just has to press "Enter Key" to roll the dice. At the top of the board, it displays a dice with the number. Whenever the player tries to end the game, there's an option available to save the unfinished game so that he/she can continue it later.

7- ATM Simultaneous:

This is a simple console-based system which is very easy to use. Talking about the system, it contains various functions which include Account Statement, Withdrawing, depositing amount and changing the pin. Here, at first the user has to enter an existing username, when the username matches the system proceed toward the next procedure i.e. asking pin number. When a user passes all these sign-in procedures, he/she can use all those features. It is too easy to use, he/she can check their respective account statements.

While depositing or withdrawing amount, he/she just has to enter the amount then the system calculates the total remaining balance of the respective account and displays to the user. And the user can view all these transactions from the account statement. In this ATM Simulator, the user can also change the pin number. For this, the user has to enter the New pin code and then confirm it in order to change the pin code. This simple console-based ATM simulator provides the simple account balance management of a respective account.

8- Conversion System:

This application would convert anything i.e. money currency rates of different countries (at least 20 currencies), temperature conversion (Fahrenheit, Celsius, Kelvin), length conversion (meter, centimeter, milli meter), distance conversion (meter, kilometer), height (feet, inches), number system conversion (binary, decimal, hexadecimal), weight conversion (pounds, grams, kilograms) etc.

NOTE: These are 7 different conversion method, add 3 more methods to it. This system should have at least 10 different conversion methods.