

Problem Statement

Create a game where the player guesses a number between two randomly generated numbers which are not visible to the player at first. If the player guesses correctly, they are awarded points and if they guess incorrectly, they lose points. The player can guess as long as they still have points. The player can also choose to reveal one of the numbers to make the game easier. However, the player will earn less points as a result.

Algorithm

1. Declare the enumeration constants under enum 'Choice': displayLeft, displayRight, Guess, Change, and Exit.
 - In the same order initialize them with integers 1 to 5.
2. Declare the integer variable 'startPoints' and initialize it to 100 to represent the amount of points the player starts with.
3. Declare the string variable 'playerName' which will be used to store the player's entered name later.
4. Using 'cout', print the header for the code including your name, euid, email, course, and department.
5. Prompt the player to enter their player name and use the getline function to store it in the 'playerName' string.
6. Using a FOR loop check every character in the 'playerName' string to see if it is anything other than an alphabetic character or a space.
 - IF it isn't, print an Error message that tells the user and prompt them to enter their name again until they enter a name containing only spaces and letters.
7. Declare a boolean variable 'newWord' and initialize it to true.
 - This variable will be used to check for new words in the player's name.
8. Using a FOR loop, initialize the character 'i' to check if each character is a space or a character in 'playerName'. We want to ensure that the first letter of every word is capitalized and every other letter in the word is lowercase.
 - IF 'newWord' is true and 'i' is a character, convert the letter to uppercase, and then set 'newWord' to false as we have found the first letter of a word.
 - ELSE IF 'i' is a space, then set 'newWord' to true to indicate that a new word has begun.
 - ELSE convert 'i' to lowercase as it is not the first letter of the word.