Python Projects

1. **Number guessing game in python**

**Task**

1. Build a Number guessing game, in which the user selects a range.
2. Let’s say User selected a range, i.e., from A to B, where A and B belong to Integer.
3. Some random integer will be selected by the system and the user
4. has to guess that integer in the minimum number of guesses

#to find the lower number of guess we have a formula

Minimum number of guessing = log2(Upper bound – lower bound + 1)

#steps

1. User inputs the lower bound and upper bound of the range.
2. The compiler generates a random integer between the range and store it in a variable for future references.
3. For repetitive guessing, a while loop will be initialized.
4. If the user guessed a number which is greater than a randomly selected number, the user gets an output “Try Again! You guessed too high“
5. Else If the user guessed a number which is smaller than a randomly selected number, the user gets an output “Try Again! You guessed too small”
6. And if the user guessed in a minimum number of guesses, the user gets a “Congratulations! ” Output.
7. Else if the user didn’t guess the integer in the minimum number of guesses, he/she will get “Better Luck Next Time!” output.
8. **Python Program for word guessing game**

**Task**

In this game, there is a list of words present, out of which our interpreter will choose 1 random word. The user first has to input their names and then, will be asked to guess any alphabet. If the random word contains that alphabet, it will be shown as the output(with correct placement) else the program will ask you to guess another alphabet. The user will be given 12 turns(which can be changed accordingly) to guess the complete word.

1. The code starts by asking the user to enter their name.
2. The code then prints a message saying “Good Luck!”
3. and sets a variable called name to the inputted name.
4. Next, the code creates a list of words using the built-in function word().
5. This function takes in an input string and returns a list of strings.
6. In this case, the list will contain five strings: rainbow, computer, science, programming, and python.
7. The next part of the code is where the randomness happens.
8. The code will randomly choose one string from the list of words and store it in word variable.
9. Then it will print out that word along with a space at the end.
10. After printing out each word, the code checks to see if any user has entered an incorrect letter by comparing each character in guess with those in word .
11. If they don’t match up then guess is set to “Wrong” and turns is decreased by 1 .
12. If there are no more letters left in guess , then Guess You Lose is printed .
13. Otherwise turn s is increased by 1 and loop continues until either Guess You Win or Wrong is printed .
14. Finally , if turn s equals 0 , then you have won !
15. Otherwise Wrong will be
16. The code will randomly choose one word from a list of words.
17. The user is then asked to enter the characters for that word.
18. Once the user enters all of the characters, the code checks to see if those characters are in the word that was chosen.
19. If they are not, it prints out “Wrong” and decreases the number of turns left for the user by 1.
20. If all turns have been used, then the code will print “You Lose.”