

Project 2:

Creating a Number Guessing Game

Goal:

Create a fun number guessing game where:

- The computer generates a random number.
- The user has 3 tries to guess the number.

Game Requirements:

- Game should start with a welcome message
- The computer should generate a random number between 1 and 100
- The user gets 3 attempts to guess the correct number
- The game should give feedback if the guess is too high, too low, or correct

Instructions:

Create a New Python File:

- In your “week 2” folder, create a new folder named “project2”.
- Open your “project2” folder and create a Python file named “number_guessing_game.py”.

Add an Intro Message:

- Let's make our game a bit more fun by starting with a welcome message for the player.
- Use the print() function to create a message at the top of your number_guessing_game.py file.

Example:

```
print("Welcome to the Number Guessing Game!")  
print("You have 3 tries to guess the correct number between 1 and 100.")
```

Set Up Variables and Random Number Generation:

- After the intro message, we need to generate a random number that the user will try to guess.
- Import the random library and use the random.randint() function to generate a random number between 1 and 100.

Example:

```
import random  
  
# Generate a random number between 1 and 100  
number_to_guess = random.randint(1, 100)
```

- Set up a variable to store the number of guesses the user has made.

Example: `attempts = 0`

Create a While Loop for the Game:

- Use a **while** loop to allow the user to keep guessing until they have used all 3 attempts or guessed the number correctly.

Example: `is_adult = False`

```
while is_adult == False:
```

- Use the `input()` function to let the user guess the number.
- Convert the input into an integer using `int()` and compare it to the generated random number.

Example: `age = int(input("what is your age?"))`

Add End-of-Game Logic:

- If the user uses all 3 attempts without guessing the number, print a message telling them the correct number.

Example:

```
is_adult = False

while is_adult == False:
    age = int(input("what is your age?"))

    if (age < 18):
        print("Not an adult")
    else:
        print ("You're an adult")
        is_adult = True
```

Run Your Game:

- Save your file and run it from the terminal. Remember to check if you're in the right folder, you should be in your project2 folder.
- Run your game by typing "python number_guessing_game.py".
- Test your game by guessing different numbers and see how the game responds.

Bonus:

- **Give a hint** after each incorrect guess (e.g., "The number is greater than 5").
- **Allow the player to play again** after they finish the game.