Task 4: Implement a Simple Guessing Game

DESCRIPTION :

- This is the description of Task-4 of my python internship at Happieloop.
- Here, the task is to implement the **Simple Number Guessing Game** where the user guesses a randomly generated number**.**
- I have created a file **task4.py** and developed python code according to the requirements to implement the game.
- The purpose of the program that I have developed is to guess the number that has been generated randomly by the computer in between the specified range.
- I have imported the "**random**"function from the python libraries.
- I have developed a function named **guessing_game** and have implemented the required code in it.
- The line **random.randint(minvalue,maxvalue)** will generate a random number by the computer.
- I have taken the range between 1 to 100.
- After generating the random number, the user will guess that number through user input in the console window.
- The code also gives the correct feedback according to the number the user guessed.
- If the input number is less than the generated number, the sentence **"Too low, please try again"** will be displayed in the console window.

- Or else If the input number is greater than the generated number, the sentence **"Too high, please try again"** will be displayed in the console window.
- If the user guesses the number correctly, finally the congratulatory message will be displayed in the console window.
- Number of attempts taken by the user to guess the number will also be printed in the console window.
- Here is the code that I have implemented for completing this task.

CODE:

```python
import random
def guessing_game():
    print("Welcome to the Number Guessing Game!")
    min_value = 1
    max_value= 100
    number = random.randint(min_value, max_value)
    attempts=0
    while True:
        guess = int(input(f"Guess a number between {min_value} and {max_value}: "))
        if guess < number:
            attempts+=1
            print("Too low, please try again!")
            print("Your attempts:",attempts)
```

```python
        elif guess > number:
            attempts+=1
            print("Too high, please try again!")
            print("Your attempts:",attempts)
        else:
            attempts+=1
            print(f"Congratulations! {number} is the correct
number you have guessed!")
            print("You have guessed correctly at ",attempts,"
attempts.")
            break

guessing_game()
```

- Now let me show the sample input and corresponding outputs in the process of guessing the number.

OUTPUT:

Welcome to the Number Guessing Game!

Guess a number between 1 and 100: 50

Too low, please try again!

Your attempts: 1

Guess a number between 1 and 100: 75

Too low, please try again!

Your attempts: 2

Guess a number between 1 and 100: 85

Too low, please try again!

Your attempts: 3

Guess a number between 1 and 100: 95

Too high, please try again!

Your attempts: 4

Guess a number between 1 and 100: 92

Too high, please try again!

Your attempts: 5

Guess a number between 1 and 100: 87

Too low, please try again!

Your attempts: 6

Guess a number between 1 and 100: 90

Too low, please try again!

Your attempts: 7

Guess a number between 1 and 100: 91

Congratulations! 91 is the correct number you have guessed!

You have guessed correctly at 8 attempts.