ASSIGNMENT

NAME- RAJAT SINGH

ROLL NO.- 46

UNIV. ROLL NO.- 2215001414

SECTION- U

SUBJECT- PYTHON PROGRAMMING

Q1- Write a program to guess the correct number.

ANS-import random

```
number = random.randint(1, 100)
guess = int(input("Guess a number between 1 and 100: "))
tries = 1
while guess != number:
    if guess > number:
        print("Too high")
    else:
        print("Too low")
    guess = int(input("Guess again: "))
    tries += 1
print(f"Congratulations! You guessed the number {number} in {tries} tries.")
```

Q2-Write a program for rock,paper,scissor (computer vs human)

ANS- import random

```python
import random

print("Let's play Rock, Paper, Scissors!")
player_choice = input("Enter your choice (rock/paper/scissors): ").lower()
computer_choice = random.choice(["rock", "paper", "scissors"])
if player_choice == computer_choice:
    print(f"Both players chose {player_choice}. It's a tie!")
elif player_choice == "rock":
    if computer_choice == "paper":
        print("You chose rock and the computer chose paper. You lose!")
    else:
        print("You chose rock and the computer chose scissors. You win!")
elif player_choice == "paper":
    if computer_choice == "rock":
        print("You chose paper and the computer chose rock. You win!")
    else:
        print("You chose paper and the computer chose scissors. You lose!")
elif player_choice == "scissors":
    if computer_choice == "rock":
        print("You chose scissors and the computer chose rock. You lose!")
    else:
        print("You chose scissors and the computer chose paper. You win!")
else:
    print("Invalid choice. Please try again.")
```

Q3- Write a program to generate password with a fixed length

ANS- import random

import string

def generate_password(length):

    characters = string.ascii_letters + string.digits + string.punctuation

    password = ''.join(random.choices(characters, k=length))

    return password

length = int(input("Enter the length of the password: "))

password = generate_password(length)

print(f"Your random password is: {password}")

Q4- Write a program to roll the dice till the 6 number is not appear. (computer vs human)

ANS- import random

def roll_dice():

    return random.randint(1, 6)

def play_game():

    print("Let's roll the dice until 6 appears!")

    input("Press Enter to roll the dice...")

    result = roll_dice()

    print(f"You rolled a {result}")

    while result != 6:

        input("Press Enter for the computer's turn...")

        result = roll_dice()

        print(f"The computer rolled a {result}")

    print("You win!")