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Course. Btech (cse)

Class roll no. 20

Assignment 3

Q1- Write a program to guess the correct number

Ans.

```
import random
```

```
# generate a random number between 1 and 100
```

```
secret_number = random.randint(1, 100)
```

```
# initialize the number of guesses
```

```
num_guesses = 0
```

```
while True:
```

```
    # get a guess from the user    guess = int(input("Guess a  
number between 1 and 100: "))
```

```
    # increment the number of guesses
```

```
num_guesses += 1
```

```
# check if the guess is correct

if guess == secret_number:

    print(f"Congratulations, you guessed the number in
    {num_guesses} guesses!")

    break

# give the user a hint    if

guess < secret_number:

    print("Too low!")

else:

    print("Too high!")
```

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

Ans.

```
import random

print("Welcome to Rock, Paper, Scissors!")

# define the options options = ["rock",
"paper", "scissors"]
```

loop until the user decides to quit while

True:

get the user's choice

user_choice = input("Enter rock, paper, scissors, or q to quit:").lower()

check if the user wants to quit

if user_choice == "q":

print("Thanks for playing!")

break

check if the user's choice is valid

if user_choice not in options:

print("Invalid choice, please try again.")

continue

generate the computer's choice

computer_choice = random.choice(options)

*# print the choices print("You chose:",
user_choice) print("The computer chose:",
computer_choice)*

```
# determine the winner    if
user_choice == computer_choice:
    print("It's a tie!")

elif (user_choice == "rock" and computer_choice == "scissors")
or \
    (user_choice == "paper" and computer_choice == "rock") or
\
    (user_choice == "scissors" and computer_choice ==
"paper"):    print("You win!")    else:
    print("The computer wins!")
```

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

Ans.

```
import random

import string

def generate_password(length):

    """Generate a random password with the given length"""

    # define the set of characters to choose from

    chars = string.ascii_letters + string.digits + string.punctuation

    # generate the password

    password = ""
    for i in range(length):

        password += random.choice(chars)

    return password

# get the desired length from the user

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

# generate the password and print it

password = generate_password(length)
print("Your
```

password is:", password) Q4- Write a program

to roll the dice till the 6 number is

not appear. (computer vs human)

Ans.

```
import random
```

```
print("Welcome to the Dice Rolling Game!")
```

```
# loop until a 6 is rolled while
```

```
True:
```

```
# prompt the user to roll the dice
```

```
input("Press enter to roll the dice...")
```

```
# roll the dice for the user and computer
```

```
user_roll = random.randint(1, 6)
```

```
computer_roll = random.randint(1, 6)
```

```
# print the rolls print("You rolled:",
```

```
user_roll) print("The computer rolled:",
```

```
computer_roll)
```

```
# check if a 6 was rolled if user_roll
```

```
== 6 or computer_roll == 6:
```

```
break
```

```
# determine the winner if user_roll == 6  
and computer_roll != 6:  
print("Congratulations, you win!") elif  
user_roll != 6 and computer_roll == 6:  
print("Sorry, the computer wins!") else:  
    print("It's a tie!")
```
