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REGISTRATION NUMBER- 22MCA0201

PYTHON ASSESMENT 2

Q1.

```
1 import random
2 N = int(input("Enter N:"))
3 M = 0
4
5 for i in range(N):
6     black_die = random.randint(1, 6)
7     green_die = random.randint(1, 6)
8     if black_die > green_die:
9         M += 1
10
11 probability = M / N
12
13 print("The probability that the number of eyes on the black die is larger than the number of eyes on the green die:", probability)
```

Output-

```
Enter N:100
The probability that the number of eyes on the black die is larger than the number of eyes on the green die: 0.46
PS U:\Python-Winter Semester-VIT 2023> 
```

Q2.

```
1  import random
2
3  secretNum = random.randint(1, 100)
4  noOfGuesses = 5
5
6  print("Welcome to the Guessing Game!")
7  print("You have 5 chances to guess the number between 1 and 100")
8
9  while(noOfGuesses):
10     guess = int(input("Enter your guess(1-100):"))
11     if(guess == secretNum):
12         print("Congratulations! You guessed the number!")
13         break
14
15     elif(guess < secretNum):
16         print("HIGHER", noOfGuesses - 1, "guesses left")
17         noOfGuesses -= 1
18
19     else:
20         print("LOWER", noOfGuesses - 1, "guesses left")
21         noOfGuesses -= 1
22
23 if(guess != secretNum):
24     print("You have lost the game! The Secret Number was", secretNum)
25
26
27
```

Output-

```
Welcome to the Guessing Game!
You have 5 chances to guess the number between 1 and 100
Enter your guess(1-100):7
LOWER 4 guesses left
Enter your guess(1-100):76
LOWER 3 guesses left
Enter your guess(1-100):89
LOWER 2 guesses left
Enter your guess(1-100):45
LOWER 1 guesses left
Enter your guess(1-100):23
LOWER 0 guesses left
You have lost the game! The Secret Number was 5
PS U:\Python-Winter Semester-VIT 2023> █
```

Q3.

```
1  subject=input("Enter the subject: ")
2
3  student_marks = float(input("Enter the marks secured by the student: "))
4
5  class_average = float(input("Enter the class average: "))
6
7  deviation = student_marks - class_average
8
9  if (deviation >= 20):
10     print("Grade in",subject,": S")
11
12  elif (deviation >= 10):
13     print("Grade in",subject,": A")
14
15  elif (-5 <= deviation <= 5):
16     print("Grade in",subject,": B")
17
18  elif (deviation <= -10):
19     print("Grade in",subject,": C")
20
21  elif (deviation <= -15):
22     print("Grade in",subject,": D")
23
24  else:
25     print("Grade in",subject,": F")
```

Output-

```
Enter the subject: Python
Enter the marks secured by the student: 76
Enter the class average: 60
Grade in Python : A
PS U:\Python-Winter Semester-VIT 2023> □
```

Q4.

```
1 gender = input("Enter gender (M/F): ")
2 age = int(input("Enter age: "))
3
4 base_fare = float(input("Enter the base fare: "))
5
6 if ((gender == "M" or gender == "m") and age >= 60):
7     concession = 0.4 * base_fare
8     fare = base_fare - concession
9     print("Eligible for senior citizen concession")
10    print("Ticket amount:", fare)
11
12 elif ((gender == "F" or gender == "f") and age >= 58):
13     concession = 0.5 * base_fare
14     fare = base_fare - concession
15     print("Eligible for senior citizen concession")
16     print("Ticket amount:", fare)
17
18 else:
19     print("Not eligible for senior citizen concession")
20     print("Ticket amount:", base_fare)
```

Output-

```
Enter gender (M/F): M
Enter age: 67
Enter the base fare: 345
Eligible for senior citizen concession
Ticket amount: 207.0
PS U:\Python-Winter Semester-VIT 2023> □
```

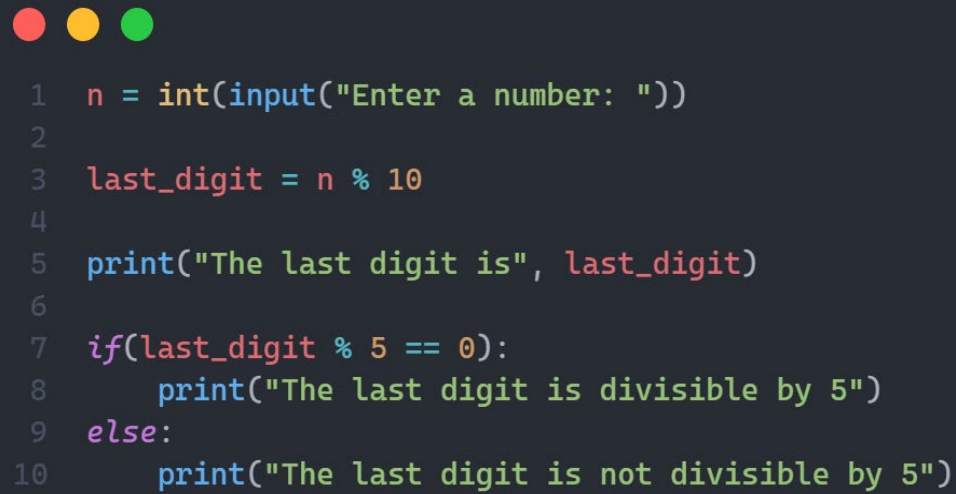
Q5.

```
1 bill_amount = float(input("Enter the bill amount: "))
2 item_category = input("Enter the item category: ")
3
4 discount = 0
5
6 if item_category == "Saree":
7     discount = 0.2
8
9 elif (item_category == "Ethnic Wears" or item_category == "Gents Wears" or item_category == "Kids Wears"):
10     discount = 0.15
11
12 net_bill_amount = bill_amount - (discount * bill_amount)
13
14 if net_bill_amount > 6000:
15     net_discount = 0.05 * net_bill_amount
16
17 net_bill_amount = net_bill_amount - net_discount
18
19 print("Net bill amount:", net_bill_amount)
```

Output-

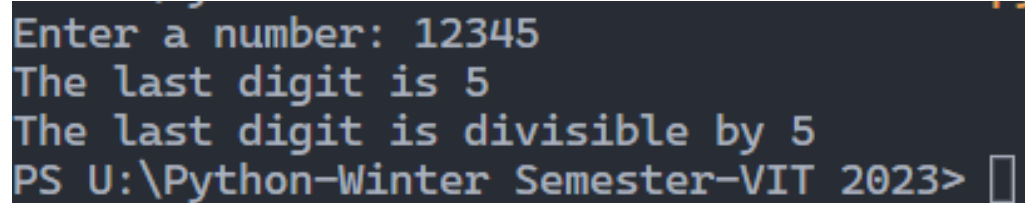
```
Enter the bill amount: 12500
Enter the item category: Saree
Net bill amount: 9500.0
PS U:\Python-Winter Semester-VIT 2023> 
```

Q6.

A screenshot of a Python script in a terminal window. The window has three colored window control buttons (red, yellow, green) in the top-left corner. The code is as follows:

```
1  n = int(input("Enter a number: "))
2
3  last_digit = n % 10
4
5  print("The last digit is", last_digit)
6
7  if(last_digit % 5 == 0):
8      print("The last digit is divisible by 5")
9  else:
10     print("The last digit is not divisible by 5")
```

Output-

A screenshot of a terminal window showing the output of the Python program. The output is as follows:

```
Enter a number: 12345
The last digit is 5
The last digit is divisible by 5
PS U:\Python-Winter Semester-VIT 2023> 
```

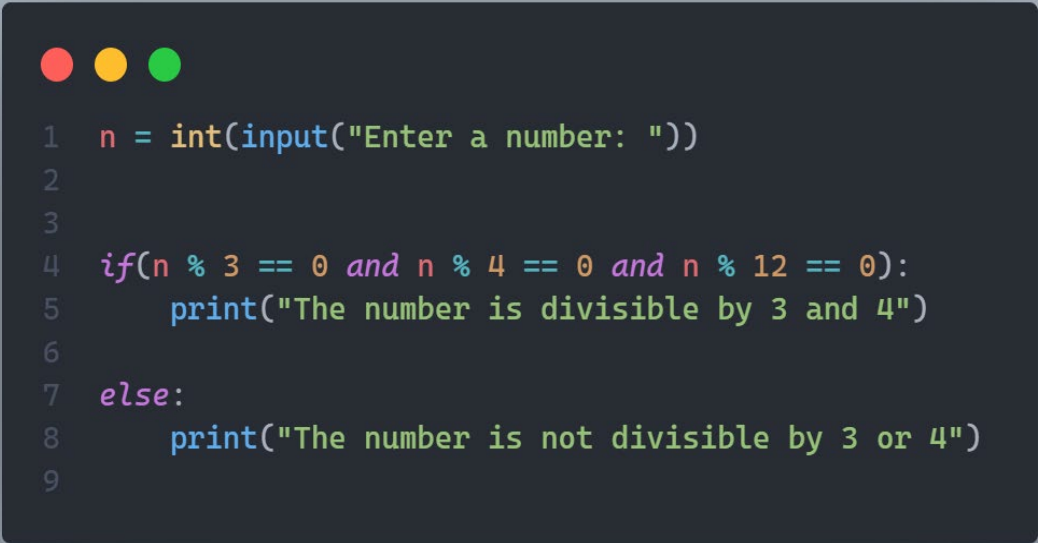
Q7.

```
1 onRoadprice = int(input("Enter the on road price of the bike: "))
2
3 if onRoadprice >= 200000:
4     tax = 0.2 * onRoadprice
5 elif onRoadprice >= 100000 and onRoadprice <= 199000:
6     tax = 0.15 * onRoadprice
7 else:
8     tax = 0.1 * onRoadprice
9
10 print("The Road Tax to be levied on the bike is: Rs.", tax)
```

Output-

```
Enter the on road price of the bike: 200000
The Road Tax to be levied on the bike is: Rs. 40000.0
PS U:\Python-Winter Semester-VIT 2023> □
```

Q8.



```
1 n = int(input("Enter a number: "))
2
3
4 if(n % 3 == 0 and n % 4 == 0 and n % 12 == 0):
5     print("The number is divisible by 3 and 4")
6
7 else:
8     print("The number is not divisible by 3 or 4")
9
```

Output-

```
Enter a number: 36
The number is divisible by 3 and 4
PS U:\Python-Winter Semester-VIT 2023> █
```