**1. Write a program to accept percentage from the user and display the grade according to the following**

**criteria:**

**Marks**

**Grade**

**>90**

**A**

**>80 and <=90**

**B**

**>=60 and <=80**

**C**

**below 60**

**D**

Ans :

1. percentage=float(input("Enter the your percentage"))

if percentage >= 90:

print(f"Your Grade is A")

elif percentage >=80 and percentage <90:

print(f"Your Grade is B")

elif percentage >=60 and percentage <80:

print(f"Your Grade is C")

else:

print("Your Grade is D")

2. **Write** a program to accept the cost price of a bike **and** display the road tax to be paid according to **the**

**following** criteria:

Tax

15%

10%

5%

Cost Price(in Rs)

>100000

50000 and <= 100000

**<=** 50000

Ans: cost\_price\_of\_bike=float(input("Enter your cost price of a bike"))

if cost\_price\_of\_bike > 100000:

print(f"You have to pay 15% Road Tax")

elif cost\_price\_of\_bike >50000 and cost\_price\_of\_bike <=100000:

print(f"You have to pay 10% Road Tax")

else:

print(f"You have to pay 5% Road Tax")

**3. Accept any city from the user and display monuments of that city.**

**City**

**Delhi**

**Monument**

**Red Fort**

**Taj Mahal**

**Agra**

**Jaipur**

**Jal Mahal**

**Ans :** City=input("Enter the City Name")

if City=="Delhi":

print(f"Red Fort")

elif City=="Agra":

print(f"Taj Mahal")

elif City =="Jaipur":

print(f"Jal Mahal")

else:

print(f"Please enter correct city name")

4. Check how many times a given number can be divided **by** 3 before it is less than or equal to 10.

def divide\_by\_3(num):

count = 0

while num > 10:

num = num / 3

count += 1

return count

number = int(input("Enter a number: "))

result = divide\_by\_3(number)

print("The number can be divided by 3", result, "times before it is less than or equal to 10.")

5. Why and When to Use while Loop **in Python give** a detailed description with example

Ans : Python While loop is used to run a block code until a certain condition is met.

i = 1

n = 5

# while loop from i = 1 to 5

while i <=n:

print(i)

i = i + 1

6. Use nested while loop to **print 3** different pattern.

1) rows = 5

for i in range(1, rows + 1):

for j in range(1, i + 1):

print(j, end=' ')

print('')

1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

2)

rows = 5

# reverse loop

for i in range(rows, 0, -1):

num = i

for j in range(0, i):

print(num, end=' ')

print("\r")

​5 5 5 5 5

4 4 4 4

3 3 3

2 2

1

3) rows = 5

for i in range(rows, 0, -1):

for j in range(0, i + 1):

print(j, end=' ')

print("\r")

0 1 2 3 4 5

0 1 2 3 4

0 1 2 3

0 1 2

0 1

4)rows = 5

for i in range(rows +1, 0, -1):

#Nested Reverse Loop

for j in range(0, i - 1):

# Display Start

print("\*", end = ' ')

print(" ")

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

5)

rows = 5

k = 2 \* rows - 2

for i in range(rows, -1, -1):

for j in range(k, 0, -1):

print(end = " ")

k = k + 1

for j in range(0, i+1):

print("\*", end = " ")

print(" ")

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**7.** Reverse a while loop to **display** numbers from 10 to 1.

i = 10

while i > 0:

print(i)

i = i – 1

Out 10

9

8

7

6

5

4

3

2

1

Note:- Please create a Google Document and write your answers and upload the shareable link of the Google Document **with** view access during the submission of the assignment.