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

**marks=int(input('Enter the student Mark='))**

**if marks>90:**

**print('Grade A')**

**elif marks>80 and marks<=90:**

**print('Grade B')**

**elif marks>=60 and marks<=80:**

**print('Grade C')**

**else:**

**print('Grade 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

**cost=int(input('Enter the cost price of bike='))**

**if cost>100000:**

**print('15% of Road Tax to be paid')**

**elif cost>50000 and cost<=100000:**

**print('10% of Road Tax to be paid')**

**else:**

**print('5% of Road Tax to be paid')**

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

City

Delhi

Monument

Red Fort

Taj Mahal

Agra

Jaipur

Jal Mahal

**city\_name=input('enter the city name:')**

**if city\_name.capitalize()=='Delhi':**

**print('This city monument is RED FORT')**

**elif city\_name.capitalize()=='Agra':**

**print('This city monument is Taj mahal')**

**elif city\_name.capitalize()=='Jaipur':**

**print('This city monument is Jal mahal')**

**else:**

**print('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.

**num=int(input('Enter the number='))**

**no\_of\_div=0**

**while(num>10):**

**num=num/3**

**no\_of\_div+=1**

**print('no of interation required',no\_of\_div)**

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

**he while loop enables the Python program to repeat a set of operations while a particular condition is true. When the condition becomes false, execution comes out of the loop immediately, and the first statement after the while loop is executed.**

**A while loop is a part of a control flow statement**

**while(num>10):**

**num=num/3**

**no\_of\_div+=1**

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

1. **j=1**

**while j<=5:**

**k=1**

**while(k<=j):**

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

**k+=1**

**print('')**

**j+=1**

**2.** **j=1**

**while j<=5:**

**k=5-j**

**while(k>=0):**

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

**k-=1**

**print('x'\*j)**

**j+=1**

**3.** **j=1**

**m=10**

**while j<=m:**

**k=m-j**

**while(k>=0):**

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

**k-=1**

**print('\*'\*((j\*2)-1))**

**j+=1**

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

**n=10**

**while n>0:**

**print(n,end=' ')**

**n-=1**

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

**n=10**

**while n>0:**

**print(n,end=' ')**

**n-=1**