**Assignment 30th jan 2023**

Q1. **write a program to accept percentage from the the user and display the grade according**

**To the following criteria ?**

percentage=int(input("enter percentage:"))

if(percentage>90):

print("grade A")

elif(percentage>80 and percentage<=90):

print("grade B")

elif(percentage >=60 and percentage<=80):

print('grade C')

elif(percentage <60 and percentage >=45):

print('grade D')

else:

print("fail")

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Q2. write a program to accept the cost of a bike and display the road tax to be paid

according to the following criteria?

bk=float(input("enter price of bike:"))

if(bk > 100000):

tax=0.15

elif(bk>50000 and bk<=100000):

tax=0.10

elif(bk<=50000):

tax=00.5

tp=bk\*tax

print("road tax to be paid",tp)

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Q3. **accept any city to the user and display the monuments of that city ?**

city =input("enter the city name :")

if(city=delhi):

print('Red fort')

elif(city=agra):

print('taj mahal')

elif city=jaipur:

print('jal mahal')

else

print('invalid city you can write delhi ,agra,jaipur :')

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Q4.  **check how many times a given number can be divided by three before it is less than or**

**equal to 10 ?**

n**=**int(input("Enter A Number Greater Than 10: "))

count**=**0

**while** n**>=**10:

**if** n**%3**==0:

count**=**count**+**1

n**=**n**-**1

print(count)

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**Q5. Why and when to use while loop in python give a detailed description with an example ?**

In programming, loops are used to repeat a block of code. For example, if we want to show a message 100 times, then we can use a loop. It's just a simple example.it saves time .we don’t write again and again anything .we can use any loop here.

Here we have written from 1 to 100 counting in just a second

i = 1

n = 100 (here we can write 100000000 it can write)

while i <= n: ##while loop

print(i)

i = i + 1

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**Q6. use nested while loop to print 3 different pattern ?**

**First pattern :-**

**i=1**

**while i<=5:**

**j=1**

**while j<=i:**

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

**j=j+1**

**print("")**

**i=i+1**

**Second pattern :-**

i = 1

while i <= 4 :

j = 1

while j <=4:

print(i,end=" ")

j += 1

print()

i += 1

**Third pattern ➖**

**i = 1**

**while i <= 4 :**

**j = 1**

**while j <=4:**

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

**j += 1**

**print()**

**i += 1**

**Q7. Reverse a while loop to display numbers from 10 to 1 ?**

i = 10

while i > 0:

print(i)

i = i - 1

**Q8. print numbers from 100 to 1?**

**i=100**

**While i>0:**

**print(i)**

**i=i-1**