30th Jan Assignment

Ans1-

```
marks_percent = float(input("Enter percentage"))
if marks_percent >90 and marks_percent <=100:
    print("Grade A")
elif marks_percent>80 and marks_percent <=90:
    print("Grade B")
elif marks_percent >=60 and marks_percent <=80:
    print("Grade C")
elif marks_percent<60:
    print("Grade D")
```

Ans2-

```
bike_cost = int(input("Enter price"))
if bike_cost >100000 :
    print("15% Tax applicable ")
elif bike_cost >50000 and bike_cost <=100000:
    print("10% Tax applicable")
elif bike_cost<=50000:
    print("5% Tax applicable")
```

Ans3-

```
city = str(input("Enter city name"))
if city=="Delhi":
    print("Red Fort is the famous monument of Delhi")
elif city=="Agra":
    print("Taj Mahal is the famous monument of Delhi")
elif city=="Jaipur":
    print("Jai Mahal is the famous monument of Delhi")
```

Ans4-

```
num =2000
count=0
while num >10:
    count+=1
    num=num/3
print(f"number will be divided {count} times")
```

Ans5-

Python while loop is used to run a block code until a certain condition is met.
The syntax of while loop is:

```
While condition:
      #body
```

This will first check the condition if it is true then it will execute the body and then again check the condition. In this way loop will be executed until the condition remains true.

So we use while loop when we we need to do a specific task again and again.

For example -

If we need to print numbers from 1 to 100, we will use while loop for this .
Here is the code for the same-

```
num=1
while num<=100:
    print(num)
    num+=1
```

Ans6-

Pattern1:

```
# right angled triangle
i=1
while i<=5:
```

```
    j=1
    while j<=i:
        print("*",end=" ")
        j+=1
    print("")
    i+=1
```

Pattern2:

```
# inverted right angled triangle
i=5
while i>=1:
    j=1
    while j<=i:
        print("*",end=" ")
        j+=1
    print("")
    i-=1
```

Pattern3:

```
# square
i=1
while i<=5:
    j=1
    while j<=5:
        print("*",end=" ")
        j+=1
    print("")
    i+=1
```

Ans7:

Reversing while loop to print numbers from 10 to 1

```
a=10
while a>=1:
    print(a)
    a-=1
```

Ans8: same as 7