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
```

ANSWER =

```python
n=int(input("enter the percentage"))
if n>90:
    print("grade A")
elif n>80 and n<=90:
    print("grade B")
elif n>=60 and n<=80:
    print("grade C")
elif n<60:
    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     COST PRICE

15%       >100000
10%       >50000 and <=100000
5%        <=50000
```

ANSWER =

```python
n=int(input("enter the  cost price"))
if n>100000:
    print("tax is 15%")
elif n>50000 and n<=100000:
    print("tax is 10%")
elif n<=50000:
    print("tax is 5%")
```

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

```
CITY     MONUMENT
```

Delhi   Red fort
Agra   Taj mahal
Jaipur   Jal mahal

ANSWER =

```
city=input("enter the city name")
if city=="delhi":
    print("monument is Red fort")
elif city=="agra":
    print("monument is Taj mahal")
elif city=="jaipur":
    print("monument is Jal mahal")
```


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

ANSWER =

```
n=eval(input("enter a number"))
count=0
while n>=10:
    if n%3==0:
        n=n/3
        count+=1
    else:
        break
print(count)
```


5. why and when to use while loop in python , give a detailed description with example.

ANSWER = a while loop is used to repeat a specific block of code an unknown number of times until a condition is met.

EXAMPLE =

```
i=1
while i<7:
 print("pwskills")
 i+=1
```

6. use nested while loop to print 3 different pattern.

ANSWER =


```
i=1
while i<=4:
    j=1
    while j<=i:
        print("*",end=")
        j+=1
    print()
    i+=1
```


```
i=1
while i<=4:
    j=1
    while j<=5-i:
        print("*",end=")
        j+=1
    print()
    i+=1
```


```
i=1
while i<=4:
    j=1
    while j<=i:
        print(j,end=")
        j+=1
    print()
    i+=1
```


7. reverse a while loop to print numbers from 10 to 1.

ANSWER =

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

8. reverse a while loop to display numbers from 10 to 1.

ANSWER =

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