Answer 1

```
percentage = float(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")
else:
    print("Grade D")
```

Answer 2

```
bikePrice = float(input("enter Bike Price"))
if(bikePrice>100000):
    tax = bikePrice*.15
    print(f"Road Tax is {tax}")
elif(bikePrice>50000 and bikePrice<=100000):
    tax = bikePrice*.1
    print(f"Road Tax is {tax}")
else:
    tax = bikePrice*.05
    print(f"Road Tax is {tax}")
```

Answer 3

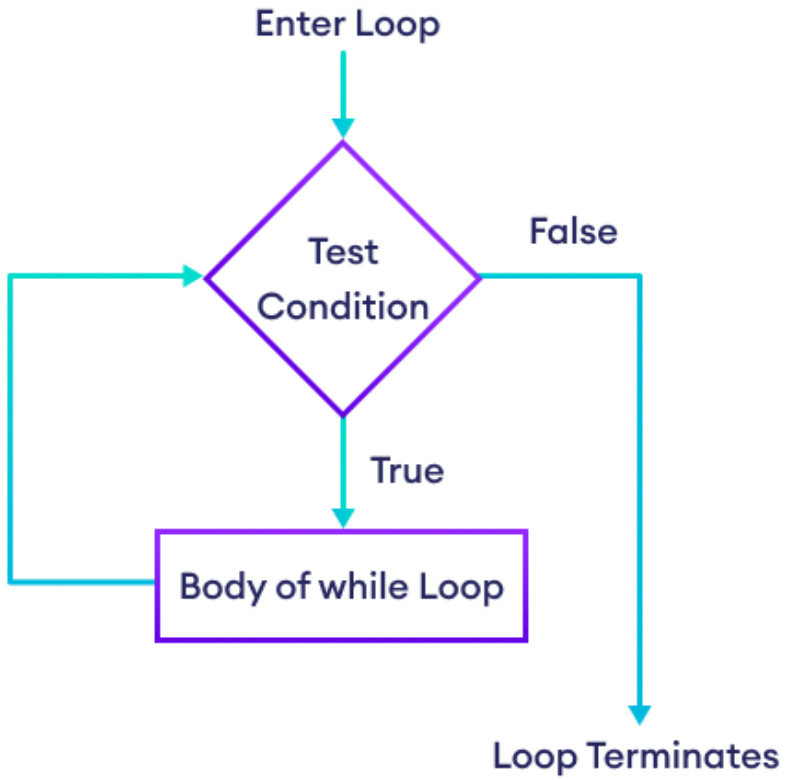
```
city = input("enter city")
if(city.casefold()=="Delhi".casefold()):
    print("Red Fort")
elif(city.casefold()=="Agra".casefold()):
    print("Taj Mahal")
elif(city.casefold()=="Jaipur".casefold()):
    print("Jal Mahal")
```

Answer 4

```
number = int(input("Enter Number"))
count = 0
while (number>10):
    number = number/3
    count=count+1
print(f"{count} times given number can be divided by 3 before it is less than or equal to 10")
```

Answer 5

Python while loop is used to run a block code until a certain condition is met.




```
# program to display numbers from 1 to 5

# initialize the variable
i = 1
n = 5

# while loop from i = 1 to 5
while i <= n:
    print(i)
    i = i + 1
```

Answer 6

Right triangle pattern

```
n = int(input("Enter the number of rows: "))
i = 1
while i <= n:
    j = 1
    while j <= i:
        print("*", end=" ")
        j += 1
    print("")
    i += 1
```

Diamond pattern

```
n = int(input("Enter the number of rows: "))
i = 1
while i <= n:
    j = 1
    while j <= n - i:
        print(" ", end="")
        j += 1
    k = 1
    while k <= 2 * i - 1:
        print("*", end="")
        k += 1
    print("")
    i += 1
i = n - 1
while i >= 1:
    j = 1
    while j <= n - i:
        print(" ", end="")
        j += 1
    k = 1
    while k <= 2 * i - 1:
        print("*", end="")
        k += 1
    print("")
    i -= 1
```

Pyramid pattern

```
n = int(input("Enter the number of rows: "))
i = 1
while i <= n:
    j = 1
    while j <= n - i:
        print(" ", end="")
        j += 1
    k = 1
    while k <= 2 * i - 1:
        print("*", end="")
        k += 1
    print("")
    i += 1
```

Answer 7

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

Answer 8

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