Untitled5

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0.1 Assignment 2

0.1.1 1. Write a program to accept percentage from the user and display the grade according to the following criteria:

0.1.2 >90 —-> A

0.1.3 >80 and <=90 —-> B

0.1.4 >=60 and <=80 —-> C

0.1.5 below 60 —-> D

[1]:
```
marks = int(input("Please provide, the marks obrained"))

grade = "F"
def gradesObtained(x):
    if x > 90 :
        grade = "A"
    elif x <= 90 and x > 80:
        grade = "B"
    elif x <= 80 and x > 60:
        grade = "C"
    else:
        grade = "D"

    print('the grade obtained is {0} '.format(grade))

gradesObtained(marks)
```

```
Please provide, the marks obrained 55
```

```
the grade obtained is D
```

0.1.6 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:

0.1.7 15% ———> 100000

0.1.8 10% ———> >50000 and <= 100000

0.1.9 5% ———> <= 50000

[4]:
```
cost = int(input("Please enter the cost of your Bike"))
def Tax(x):
    if x > 100000 :
        roadTax = (15/100)*x
    elif x > 50000 and x <= 100000 :
        roadTax = (10/100)*x
    elif x <= 50000:
        roadTax = (5/100)*x

    print('The road tax to be paid for your bike is. {0} '.format(roadTax))

Tax(cost)
```

```
Please enter the cost of your Bike 200000
```

```
The road tax to be paid for your bike is. 30000.0
```

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

0.1.11 Delhi ———> Red Fort

0.1.12 Agra ———> Taj Mahal

0.1.13 Jaipur ———> Jal Mahal

[9]:
```
city = input("Please enter the City name.")
def DisplayMonument(x):
    if x.lower() == "delhi" :
        monument = "Red Fort"
    elif x.lower() == "agra" :
        monument = "Taj Mahal"
    elif x.lower() == "jaipur" :
        monument = "Jal Mahal"

    print('The famous monument of the city {0} is {1} '.format(x,monument))

DisplayMonument(city)
```

```
Please enter the City name. jaipur
```

```
The famous monument of the city jaipur is Jal Mahal
```

0.1.14 4. Check how many times a given number can be divided by 3 before it is lesst h a nor equal to 10.

[26]:
```
x = int(input("Please enter a number"))

def checkNumberDevisibleBy3(a):
    b = a
    count = 0
    while a > 10:
        count = count+1
        a = a/3
    print("The number of times {0} is divisible by 3 is {1}".format(b,count))

checkNumberDevisibleBy3(x)
```

```
Please enter a number 99

The number of times 99 is divisible by 3 is 3
```

0.1.15 5. Why and When to Usewhile Loopin Python give a detailed description with example

Ans. While is used in a scenario where the loop functionality to be used based on condition. For example Trafict light which works on timer. the red light will be swithced on looping for checking every second once it meets time it will turn to green and again loop while check for another condition every second.

[29]:
```
### 6. Use nested while loop to print 3 different pattern.
```

[30]:
```
i=1
while i<=5:
    j=1
    while j<=i:
        print(j,end=" ")
        j=j+1
    print("")
    i=i+1
```

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

[31]:
```
i=1
while i<=5:
    j=1
    while j<=i:
        print(i,end=" ")
```

```
        j=j+1
    print("")
    i=i+1
```

```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

[37]:
```
i=5
while i>=0:
    j=1
    while j<=i:
        print(j,end=" ")
        j=j+1
    print("")
    i=i-1
```

```
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```

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

[41]:
```
i = 10
while i >= 1:
    print(i)
    i-=1
```

```
10
9
8
7
6
5
4
3
2
1
```

[ ]:
```

```