PYTHON
Lab exercise : 4

1). Accept an integer from user tell user that whether entered number is even or odd. Example:

Enter the number: 7
7 is an odd number
Do you want to check another number? Y
Enter the number: 2
2 is an even number
Do you want to check another number? N

```
instruct='Y'
while(instruct == 'Y' or instruct == 'y'):
    no = int(input("enter an integer number :- "))
    if(no%2 == 0):
        print(no," is an even number.")
        instruct=input('Do you want to check another number ? ')
    elif(no%2 == 1):
        print(no," is an odd number.")
        instruct=input('Do you want to check another number ? ')
```

```
D:\exercise_4>python "4[1].py"
enter an integer number :- 12
12  is an even number.
Do you want to check another number ? Y
enter an integer number :- 23
23  is an odd number.
Do you want to check another number ? y
enter an integer number :- 34
34  is an even number.
Do you want to check another number ? n
```

2). Accept set of numbers from the user, filter and display even numbers and odd numbers separately. Example:

Enter set of numbers: 2,8,7,6,4,5,7,9,11
Following are even numbers: 2,8,6,4
Following are odd numbers: 7,7,9,11

```
import argparse
a=[a for a in input('enter three values : ').split()]
length=len(a)
print("Odd numbers are : ",end="\t")
for i in range(length):
        if(int(a[i]) % 2 != 0):
                print(a[i],end="\t")
print("\nEven numbers are : ",end="\t")
for i in range(length):
        if(int(a[i]) % 2 == 0):
                print(a[i],end="\t")
```

```
D:\exercise_4>python "4[2].py"
enter three values : 1 2 3 4 5 6 7 8
Odd numbers are :       1       3       5       7
Even numbers are :      2       4       6       8
```

3). Accept an integer from user tell user that whether entered number is Prime or Not Prime.

Note: Refer Example 1

```
instruct='y'
no = int(input("Enter number :- "))
while(instruct == 'y' or instruct == 'Y'):
        counter=0
        for i in range(1,no):
                if(no%i==0):
                        counter+=1
                        if(counter==2):
                                print(no," is non-prime number")
                                break
        if(counter!=2):
                print(no," is prime number")
        instruct=input("Do you want to check another number ? ")
        if(instruct!='y' and instruct!='Y'):
                break;
        no = int(input("enter number :- "))
```

```
D:\exercise_4>python "4[3].py"
Enter number :- 12
12  is non-prime number
Do you want to check another number ? y
enter number :- 39
39  is non-prime number
Do you want to check another number ? y
enter number :- 17
17  is prime number
Do you want to check another number ? n
```

4). Accept a character from the user tell user that whether entered number is Vowel or Consonant. Example:

Enter one character: a
a is Vowel
Do you want to check another character? Y
Enter one character: s
s is consonant
Do you want to check another character? N
Thank you for using my Program

```
vowel = ['a','e','i','o','u','A','E','I','O','U']
instruct='y'
ch = input("Enter one character :- ")
length=len(vowel)
while(instruct == 'y' or instruct == 'Y'):
        counter=0
        for i in range(length):
                if(ch==vowel[i]):
                        print(ch," is Vowel")
                        break;
        for i in range(len(vowel)):
                if(ch!=vowel[i]):
                        counter+=1
        if(counter==length):
                print(ch,' is a consonent')
        instruct=input("Do you want to check another characher ? ")
        if(instruct!='y' and instruct!='Y'):
                break;
        ch = input("Enter one character :- ")
print("Thank you for using my Program ")
```

```
D:\exercise_4>python "4[4].py"
Enter one character :- a
a  is Vowel
Do you want to check another characher ? Y
Enter one character :- s
s  is a consonent
Do you want to check another characher ? N
Thank you for using my Program
```

5). Accept integer from the user, display the table of that number. Ask user to continue or not (Y/N).

```
instruct='y'
no = int(input("Enter one number :- "))
while(instruct == 'y' or instruct == 'Y'):
        for i in range(1,11):
                print(no," X ",i," = ",(no*i))


        instruct=input("Do you want know another table ? ")
        if(instruct!='y' and instruct!='Y'):
                break;
        no = int(input("Enter one number :- "))
```

```
D:\exercise_4>python "4[5].py"
Enter one number :- 10
10  X  1  =  10
10  X  2  =  20
10  X  3  =  30
10  X  4  =  40
10  X  5  =  50
10  X  6  =  60
10  X  7  =  70
10  X  8  =  80
10  X  9  =  90
10  X  10  =  100
Do you want know another table ? y
Enter one number :- 20
20  X  1  =  20
20  X  2  =  40
20  X  3  =  60
20  X  4  =  80
20  X  5  =  100
20  X  6  =  120
20  X  7  =  140
20  X  8  =  160
20  X  9  =  180
20  X  10  =  200
Do you want know another table ? n
```

6). Take an input from the user. Also ask number of rows to be displayed. Make a right angle triangle using that input.

```
symbol = input("Enter symbol for triangle :- ")
rows = int(input("Number of rows :- "))

for i in range(rows):
        for j in range(i+1):
                print(symbol,end=" ")
        print()
```

```
D:\exercise_4>python "4[6].py"
Enter symbol for triangle :- *
Number of rows :- 5
*
* *
* * *
* * * *
* * * * *
```

7). Take an input from the user. Also ask number of rows and columns to be displayed. Make square or rectangle as per users input.

```
symbol = input("Enter symbol for triangle :- ")
rows = int(input("Number of rows :- "))
columns = int(input("Number of columns :- "))
for i in range(rows):
        for j in range(columns):
                print(symbol,end=" ")
        print()
```

```
D:\exercise_4>python "4[6].py"
Enter symbol for triangle :- *
Number of rows :- 5
Number of columns :- 5
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
```

8). Display prime numbers or non prime numbers between 1 and 10 on the basis of user's choice. If user inserts 1, than display Prime numbers. If user inserts 2, than display Non prime numbers.

```
instruct = int(input("Choose one :\n\t(1) Prime number\n\t(2) Non-prime number\n->"))
for i in range(1,11):
        counter = 0
        for j in range(1,i):
                if(i%j == 0):
                        counter+=1
        if(instruct == 1):
                if(counter == 1):
                        print(i)
        elif(instruct == 2):
                if(counter > 1):
                        print(i)
        else:
                print("Invalid choise")
                break
```

```
D:\exercise_4>python "4[8].py"
Choose one :
        (1) Prime number
        (2) Non-prime number
->6
Invalid choise

D:\exercise_4>python "4[8].py"
Choose one :
        (1) Prime number
        (2) Non-prime number
->1
2
3
5
7

D:\exercise_4>python "4[8].py"
Choose one :
        (1) Prime number
        (2) Non-prime number
->2
4
6
8
9
10
```

9). Display odd numbers and even numbers between 1 and 20 vertically.

1 2
3 4
5 6
. .
19 20

```
for i in range(1,21):
    if(i%2==0):
        print(i)
    else:
        print(i,end="\t")
```

```
D:\exercise_4>python "4[9].py"
1       2
3       4
5       6
7       8
9       10
11      12
13      14
15      16
17      18
19      20
```

10). Display number (2-10) and its cube vertically.

2 8
3 27
4 64
. .
10 1000

```
for i in range(2,11):
    print(i,end="\t")
    print(i**3)
```

```
D:\exercise_4>python "4[10].py"
2       8
3       27
4       64
5       125
6       216
7       343
8       512
9       729
10      1000
```