Course Work (lab)

Q1) Write a Python program that prompts the user to enter a student mark, and decides wither it is pass or failure.

Solution:

```
mark = int (input ('Please, enter a student mark'))
if mark >= 50:
   print ('Pass')
else:
   print ('Fail')
```

Q2) Write a Python program that input two integers N and M and out put M^N

Hint: Don't use the ** operator, use for loop

Solution:

```
M, N = int (input ('Enter two integers')), int (input ())

result = 1

for i in range (1, N+1)

    result *= M

print ('result = ', result)
```

Q3) Write a program to calculate the following:

$$A = \sum_{x=1}^{10} X^2$$

Solution:

```
x=int(input("Enter integer number"))

sum=0

for i in range (1,11):

    sum+=x**2

print ("sum=",sum)
```

Q4) Write a Python program that prints the odd numbers from 1 to 100.

Hint: using while statement

Solution:

i = 1
 while i <= 100:
   print (i)
   i+=2

```
i = 1
for i in range (1,100,2):
    print (i)
```

Q5) Write a Python program that enter some integer numbers from the input stream and print each number with a message showing if it is positive or negative. The program terminates "stop running" when the last number is zero "0".

Hint: using while statement

Solution:

```
n = int (input('Please, enter sequence of integers when finished enter 0'))

while n != 0:

  if n>0:

    print ('positive')

  else:

    print ('negative')

  n = int (input())
```

Q6: Write a Python program that inputs six grades for student and output

a.   The grades summation for each student

b.   The grades average for each student

Solution:

```
sum = 0
print ('Please enter 4 marks for student #')
for m in range (1,5):
    mark = int (input ('Enter mark #'+str(m)))
    sum += mark
print ('sum of marks of student #''=', sum)
print ('average of marks of student #', sum/4)
```

Q7: Write a Python program that finds a prime numbers between1 to 100.

Hint: an even number is a prime if it is 2. An odd integer is prime if it is not divisible by any odd integer less than or equal to the square root of the number.

Solution

for i in range (1,101):
 	
  if i == 2:
 	
    print (i)
 	
  elif i%2 == 1:
 	
    count = 0
 	
    for x in range (2,i):
 	
      if i%x==0:
 	
        count+=1
 	
    if count == 0:
 	
      print (i)
	``lower = int(input ("Please, Enter the Lowest Range Value: "))

upper = int(input ("Please, Enter the Upper Range Value: "))

for number in range (lower, upper + 1):
    if number > 1:
        for i in range (2, number):
            if (number % i) == 0:
                break
        else:
            print (number)``` |

Q8: Write a Python function to check whether a number is in a given range.

```python
def test_range(n):

    if n in range(3,9):

        print(n," is in the range")

    else :

        print("The number is outside the given range.")


test_range(5)
```