1 Hours Paper 4:00 PM-5:00 PM

Python - Daily Test 9 - 6-Feb-17 (Nested Loops, Loop Control Statements)

1. Write a "Python" program for demonstrating nested for loop for printing multiplication tables of mintablenum to maxtablenum, where mintablenum and maxtablenum are user entered numbers. The code should be generic, just giving an example for your understanding.

If user entered 2 and 6 then it should print multiplication tables from 2 to 6 having each table in one row only, which is as follows:

2 4 6 8 10 12 14 16 18 20

3 6 9 12 15 18 21 24 27 30

4 8 12 16 20 24 28 32 36 40

5 10 15 20 25 30 35 40 45 50

6 12 18 24 30 36 42 48 54 60

2. Write a program in Python to find the product of Primes. Given two numbers begin and end (both inclusive) find the product of primes within this range. If there are no primes in that range you must print 1.

Print the message exactly as shown in samples, code should be generic, given samples for understanding purposes only.

Samples:

Enter Start Number: 1

Enter End Number: 10

The primes between 1 and 10 are [2,3,5,7] and their product is 2*3*5*7=210.

Enter Start Number: 5

Enter End Number: 20

The primes between 5 and 20 are [5,7,11,13,17,19] and their product is 1616615.

NOTE:

1. **Don't use functions and infinite loops.**

2. **The prime number check should be done with limit of square root of number but don't do from 2 till the number.**

3. **Write a program in Python for Special factorial number. Given a number say, num, the task is to find first natural number, x, whose factorial is divisible by num.**

Input: 16

Output: 6

Explanation:

The required number is 6 whose factorial 720 is divisible by 16

Input: 5

Output: 5

Explanation:

The required number is 5 whose factorial 120 is divisible by 5

Input: 25

Output: 10

Explanation:

The required number is 10 whose factorial 3628800 is divisible by 25

4. Write a program in Python for Square Numbers (Don't use functions and infinite condition/loop).

A number k is called a square number if for some value of d > 1, k % (d*d) = 0.

Given a number N, the task is to find the total number of positive square numbers less than or equal to N.

Repeat the process until user enters 0 and ignore negative input.

4 -> (divisible by 2*2)

8 ->(divisible by 2*2)

9 ->(divisible by 3*3)

Enter Number to find the square numbers: 2

No numbers less than or equal 2 are square numbers

Enter Number to find the square numbers: 4

Square numbers are: 4

Enter Number to find the square numbers: -10

Please enter +ve number only or 0 to exit

Enter Number to find the square numbers: 10

Square numbers are: 4, 8, 9

Enter Number to find the square numbers: 0

End of program