In The Name of God

Shiraz University

Fundamentals of Computer Programming

Assignment #4

Due Time: November 4, 2016, 23:55

1. Write a python program that gets a non-negative number as input and prints "Yes" if the number is palindrome, otherwise it prints "No".

> Input:
>
> >>> 12321
>
> Output:
>
> Yes
>
> Input:
>
> >>> 258
>
> Output:
>
> No

2. Write a python program that takes two number as input, a base and a number in that base, and prints the number's value in decimal.
(Note: The number is positive and the base is a number between 2 and 9.)

Input:

Enter number:

>>> 10111

Enter base:

>>> 2

Output:

23

Input:

Enter number:

>>> 166

Enter base:

>>> 7

Output:

97

3. The greatest common divisor (GCD) of two integers is the largest positive integer that divides the numbers without a remainder.
The least common multiple (LCM) of two integers is the smallest positive integer that is divisible by both numbers.
Write a python program that takes two nonzero integers as input and calculates their GCD and LCM and prints them.

```
Input:

 >>> 8

 >>> 12


Output:

 GCD: 4

 LCM: 24
```

4. Write a python program that takes a number as input and calculates the sum of its digits and continues calculating and printing its sum of digits until it reaches a number lower than 10.
(Note that the input number can be negative. You can simply ignore its sign.)

```
Input:

>>> 5896


Output:

 28     # Note:  5 + 8 + 9 + 6 = 28

 10     # Note: 1 + 0 = 1

 1      # Note: 1 < 10
```