

Title	Assignment 4
Due	23-Mar-2012 17:00
Number of resubmissions allowed	0
Grade	100.0 (max 100.0)
Modified by instructor	14-Mar-2012 17:16

## Instructions

This tutorial is about flow control mechanisms in Python, such as *if*, *for* and *while*.

### Question 1

Write a program to draw a rectangle of a given height and width using the `**` character.

*Sample I/O:*

```
Enter the height of the rectangle:
3
Enter the width of the rectangle:
7
*****
*****
*****
```

Save your program as **rectangle.py**.

### Question 2

Write a program to draw an inverted right-angled triangle of a given height using the `**` character. The number of characters in the top line must be the same as the height of the triangle.

*Sample I/O:*

```
Enter the height of the triangle:
5
*****
****
***
**
*
```

Save your program as **triangle.py**.

### Question 3

Write a program to calculate the value of  $e$ . Your answer must be correct to eleven decimal places.

Your program should use a loop that terminates when adding the next term does not change the value. Use the formula below:

*Sample I/O:*

2.71828182846

Save your program as **e.py**.

#### Question 4

[Reference: <http://www.youtube.com/watch?v=Nej4xJe4Tdg>]

Find all palindromic primes between two integers supplied as input (start and end points are excluded).

A palindrome number is a number that reads the same from the front and the back. Examples are: 212, 44, 9009, 4567654. To calculate whether a number is a palindrome or not, you can first reverse the number (using the % operator and a loop, or a String) and then check for equality.

A prime number is one that is only divisible by 1 and itself. Examples are: 3, 11, 313.

Some examples of palindromic primes are: 11, 191, 313

*Sample I/O:*

```
Enter the starting point N:
200
Enter the ending point M:
800
The palindromic primes are:
313
353
373
383
727
757
787
797
```

Save your program as **palprime.py**.

#### Weighting of Marks

- Question 1: 15
  - Question 2: 25
  - Question 3: 25
  - Question 4: 35
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## Submission

This assignment does not accept online submissions. Contact your instructor for additional instructions.

Done