

SS 250 Fall 2012

Assignment One

August 28, 2012

1 Task

1. Write a simple Python program that defines an integer variable n at the beginning of a script. Your program should print all the primes between 2 and n , inclusive.
2. Write another Python program that computes Pi according the Wallis formula

$$\pi = 2 \prod_{i=1}^{\infty} \frac{4i^2}{4i^2 - 1}$$

Find k (roughly) such that

$$2 \prod_{i=1}^k \frac{4i^2}{4i^2 - 1}$$

approximates π correctly to five decimal places, i.e., 3.14159.

2 Due Date

This assignment is due at class time on August 30th. You should turn in two files containing your source code on OAK, and sample output from the first for an integer greater than 1000 (all zipped together, for example). This assignment is worth 10 points. It will be graded by running the programs.

3 Suggestions

1. Note that indentation is compulsory in Python. This is the price we pay for getting rid of '{' and ';' characters. You can indent by whatever amount you want, but it's considered good practice to indent by 4 spaces.
2. Don't write long lines of code, that is, code that is longer than 80 characters. Use the line break '\n' character instead.
3. Use meaningful variable and object names.