Homework #8 – Twin Primes in Python
CSCI 450

Preparation
You will need to finish a program using the programming language Python.
Check Course Information on Bb for detailed instructions on Python installation.

Problem Statement
Twin primes are a pair of prime numbers that differ by 2. For example, 3 and 5 are twin primes, 5 and 7 are twin primes, and 11 and 13 are twin primes. Write a program to find all twin primes less than ***num*** (an integer entered by the user).

This program should contain the following functions:

- **isPrime**. This function should accept an integer as parameter, and return whether that integer is a prime number.
- In the **main** function, ask the user to enter an integer, call the isPrime function and display all the twin primes less than the number entered.

(Check sample output on next page.)

Requirements & Considerations

1. Name your program **twinPrimes_yourLastName.py**

2. Include ***header*** comments (at the beginning of your program, I used Java comments below, what is the comment symbol for Python?) formatted as shown below, using your name and student ID, etc. instead. Be sure to include the Honor Code statement and program description. Your electronic submission of the program file will represent your endorsement of the Honor Code Statement.

```
/* Course: CSCI 450, Section 1
   Student Name: Jane Doe
   Student ID: 12345678
    Homework #8
    Due Date:

    In keeping with the Honor Code of UM, I have neither given nor received any
    inappropriate assistance from anyone other than the TA or the instructor.

    Program Description: ……
*/
```

3. Before each significant step, provide a comment explaining the step (do not comment every line of code).

4. Submit your finished program (**twinPrimes_yourLastName.py**) on Blackboard using the **Homework #8** link under Homework Assignments button.

Check Sample Output on next page →

Sample Output

```
Enter an integer: 100

The twin primes are:
(3, 5)
(5, 7)
(11, 13)
(17, 19)
(29, 31)
(41, 43)
(59, 61)
(71, 73)
```