Python – Intersect

Purpose

This lab was designed to teach you how to use Boolean logic to solve a problem.

Description

Write a Python function interval_intersect that takes parameters a, b, c, and d and returns True if the intervals[1] [a,b] and [c,d] intersect and False otherwise. While this test may seem tricky, the solution is actually very simple and consists of one line of Python code (you may assume that a≤b and c≤d). Drawing a picture helps to visualize this problem and there's more than one way to arrive at the correct answer.

Program Shell

intersect.py provided for you

Sample Data

```
[0, 1] and [1, 2] passed as (0, 1, 1, 2)
[1, 2] and [0, 1]
[0, 1] and [2, 3]
[2, 3] and [0, 1]
[0, 3] and [1, 2]
```

Sample Execution

```
Intervals [0, 1] and [1, 2]intersect.
Intervals [1, 2] and [0, 1]intersect.
Intervals [0, 1] and [2, 3]do not intersect.
Intervals [2, 3] and [0, 1]do not intersect.
Intervals [0, 3] and [1, 2]intersect.
Intervals [5, 6] and [3, 8]intersect.
```

[1]An integer interval [a,b], a < b, is a set of all consecutive integers beginning with a and ending with b (inclusive).