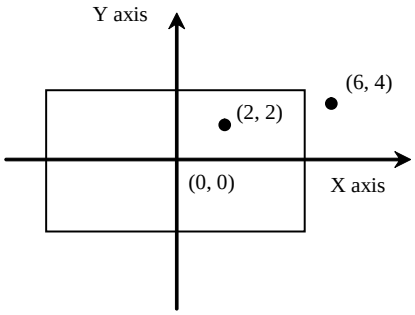
COSC 24L3: Lab Assignment #2
Computer Science Department @ Dallas Baptist University
Fall 2023

1. Write a program that prompts the user to enter a point (x, y) and checks whether the point is within the rectangle centered at (0, 0) with width 10 and height 5. For example, (2, 2) is inside the rectangle and (6, 4) is outside the rectangle, as shown in the Figure.



Here are sample runs of the program:

Sample run 1:

```
Enter a point with two coordinates: 2 2
Point (2.0, 2.0) is in the rectangle
```

Sample run 2:

```
Enter a point with two coordinates: 6 4
Point (6.0, 4.0) is not in the rectangle
```

2. The Fast Freight Shipping Company charges the following rates (per 500 miles shipped):

Weight of Package (in Kilograms)	Rate
2 kg or less	$1.10
Over 2 kg but not more than 6 kg	$2.20
Over 6 kg but not more than 10 kg	$3.70
Over 10 kg but not more than 20 kg	$4.80

Write a program that asks for the weight of the package and the distance it is to be shipped, and then displays the charges.

Input Validation: *Do not accept values of 0 or less for the weight of the package. Do not accept weights of more than 20 kg (this is the maximum weight the company will ship). Do not accept distances of less than 10 miles or more than 3,000 miles. These are the company's minimum and maximum shipping distances.*

Sample run 1:
Weight (kg): *15*
Distance (mi): *800*
Fee: $9.6

Sample run 2:
Weight (kg): *-10*
Fail: *Weight -10 kg - Invalid weight*

Sample run 3:
Weight (kg): *22*
Fail: Weight 22 kg - Too heavy

Sample run 4:
Weight (kg): *19*
Distance (mi): *5*
Fail: Distance 5 – Too short

Sample run 5:
Weight (kg): *9*
Distance (mi): *5000*
Fail: Distance 5000 – Too far