Internship Object-Oriented Programming in C ++ (WS 2020/2021)

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P1 Live Extension Task (B)

Expand your prepared C ++ - until the end of this group hour follows code: /
Extend your prepared C ++ code until the end of this group hour as follows:

1. Write a function called **printDiagonalLength** that has a reference to a rectangle as its only parameter and no return value. The diagonal length of the passed rectangle is to be calculated and an output to be written to the standard character output stream as in the example below. /
   Write a function called **printDiagonalLength** that has a reference to a rectangle as the only parameter and no return value. The diagonal length of the passed rectangle shall be calculated and outputted like shown below written onto the standard character output stream.

2. Write a function called **isCorrect** that has a reference to a rectangle as its only parameter and a Boolean return value. An x and y coordinate comparison should be used to check whether the point (x1, y1) represents an upper left corner with respect to the stored lower right corner point (x2, y2). (Note: the corresponding output should be made in the **main** function , not in this function.)
   Write a function called **isCorrect** that has a reference to a rectangle as the only parameter and a Boolean return value . It shall be checked by an x- and y-coordinate comparison whether the point (x1, y1) is an upper-left corner with respect to the stored lower-right corner point (x2, y2).(Hint: the respective output shall be done in function **main** , not in this function.)

3. Write a function called **makeBigSquare** that has a reference to a rectangle as its only parameter and no return value. In the fuselage, this rectangle should be enlarged to a square, the side length of which is the larger of the two, with the upper left corner held down (see example). /
   Write a function called **makeBigSquare** that has a reference to a rectangle as the only parameter and no return value. In its body the rectangle shall be modified into a square with the bigger side length of both and fix left upper corner (see figure).
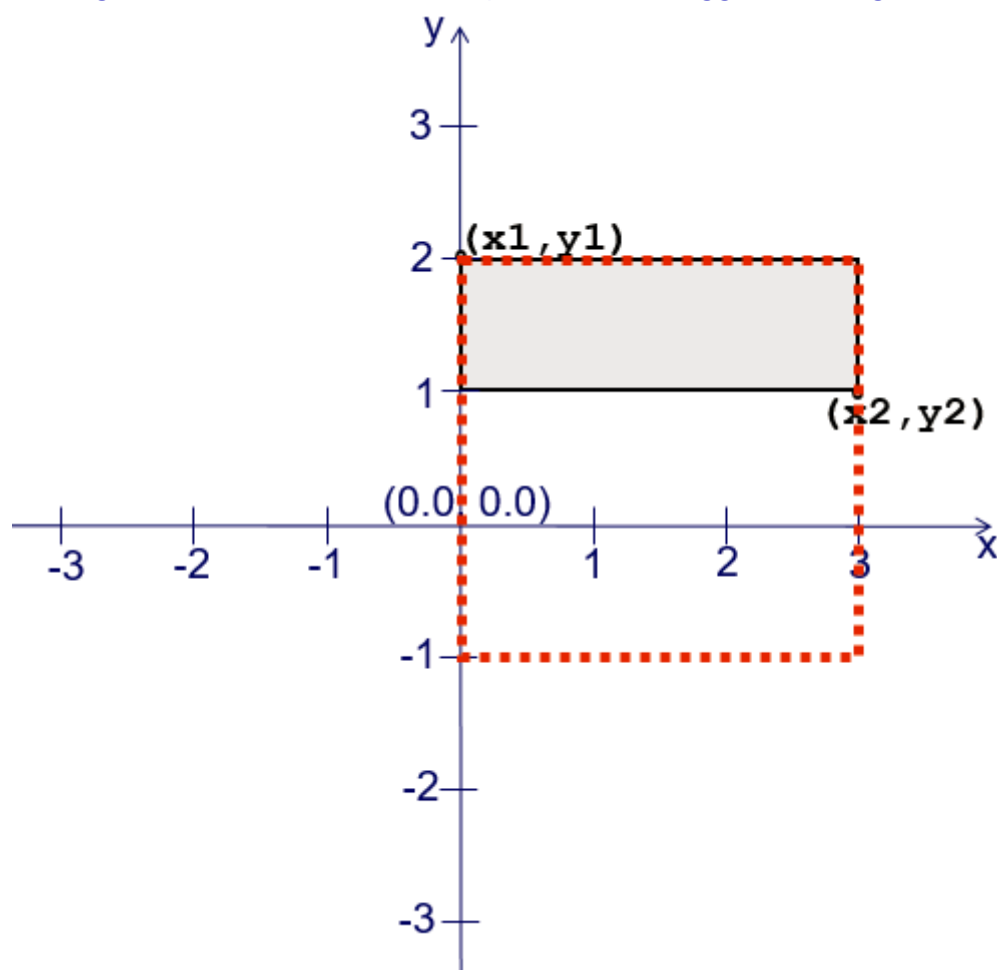
4. Call in the function **main** above functions suited to complement and expenses such as in the example below gezeigt./
   In function **main** call above functions Appropriately and add output as shown in the Example below.

Example program run / Example Program Run

```
input upper left corner: 0 2
input lower right corner: 3 1
upper left corner: (0,2)
lower right corner: (3,1)
area rectangle: 3
diagonal length: 3.16228
rectangle is correctly stored
upper left corner: (0 , 2)
lower right corner: (3, -1)
area rectangle: 9
```

Last changed: Friday, November 13th, 2020, 11:24 pm

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