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CPADS Lab Activity #3

1. Open PyCharm making sure to select the Python 3.x interpreter. Create a new project named **CS100-Lab3**. Right click on **CS100-Lab3** in the left sidebar and select **New->Python File**. Name the file **pinwheel.py**. Type the following code **exactly** as shown (note, **BE CAREFUL WITH INDENTATION** which is **tabs**)

```python
import turtle

def drawSquareFromCenter(t,x):
    # Move to lower left corner
    t.penup()
    t.forward(-x/2)
    t.right(90)
    t.forward(x/2)
    t.left(90)

    # Draw square
    t.pendown( )
    t.forward(x)
    t.left(90)
    t.forward(x)
    t.left(90)
    t.forward(x)
    t.left(90)
    t.forward(x)
    t.left(90)

    # Move back to center
    t.penup( )
    t.forward(x/2)
    t.left(90)
    t.forward(x/2)
    t.right(90)

def main():
    # Create new turtle called bob
    bob = turtle.Turtle()

    # Draw graphics using bob
    drawSquareFromCenter(bob,200)

    # Press any key to exit
    input()

main()
```

Execute your program by selecting **Run->Run->pinwheel.** You should see a window open up and a turtle draw a square returning to the center. Hit the <enter> key in the bottom pane of PyCharm to close the program.

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2. **Add/modify code in main()** as necessary in the **# Draw Graphics using bob** section *using* the **drawSquareFromCenter(x)** function to construct the following pinwheel (assume the squares are sizes 40, 80, 120, 160).

   Hint: USE ONE OF YOUR STRATEGIES FROM LAB ACTIVITY 2 AND CODE INCREMENTALLY! BE SURE TO COMMENT YOUR CODE!!!
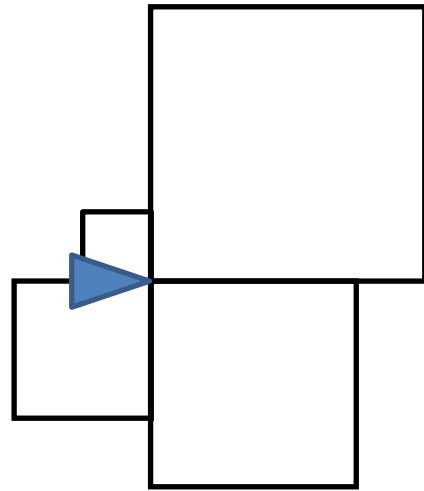
Upload your finished program (**ONLY THE .py file)** to Marmoset
https://cs.ycp.edu/marmoset