CS100 Fall 2018

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CPADS Exam 1 Review

1. Open Pycharm making sure to select the Python 3.x interpreter. Create a new project named CS100-Exam1Review. Right click on CS100-Exam1Reveiw in the left sidebar and select New->Python File. Name the file diamond. Type the following code exactly as shown copying the drawSquareFromCenter() function code from pinwheel.py in CS100-Lab3

```
import turtle
from math import *

def drawSquareFromCenter(turtle,x):...

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

# Get user input
    size1 = int(input('Enter size for the top square: '))

# Draw graphics
    drawSquareFromCenter(bob,size1)

# Press any key to exit
    input()

main()
```

The program should prompt the user to enter a size for the first square draw it centered about the origin.

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2. Develop a strategy and write code using **drawSquareFromCenter(x)** to construct the following diamond figure assuming the cursor begins as shown. The user will enter **size1** which represents the size of the smaller squares. The cursor should be returned to its original position using computations. **There should be no computations in drawing commands, use intermediate variables for calculated values.**

Hint: Consider how the cursor must move in between each piece of the figure.

