

Homework Assignment: Unleashing Creativity and Data Manipulation with Python Modules

Objective: This assignment introduces students to Python modules that facilitate drawing and data manipulation. Students will explore methods for creating visual art and generating, sorting, and manipulating datasets using these modules.

Problem 1: Drawing with Turtle Graphics

1. Research and install the `turtle` module in Python.
2. Write a Python script that uses the `turtle` module to draw a simple geometric shape, such as a square or triangle. Experiment with different `turtle` methods to change the color, pen size, and other attributes.
3. Enhance your script to draw a more complex figure, like a star or a spiral. Utilize loops to achieve repetitive patterns.

```
# =====  
# . Exercises and Challenges  
# =====  
  
# Exercise 1: Create a Turtle program that draws a colorful pattern of  
your choice.  
# Exercise 2: Use the Random module to generate a random password with a  
specified length.  
# Challenge 1: Write a Turtle program that draws a complex geometric  
pattern.  
# Challenge 2: Generate a random quiz with questions and answer choices  
using the Random module.
```