Overview

In this lesson, you will be introduced to Python's built-in `turtle` library. The turtle library allows programmers to create drawings and animations by controlling a virtual turtle that moves around the screen. This first lesson is exploratory and focuses on setting up turtle and exploring what it can do before writing any turtle programs.

Important Information

The `turtle` library comes bundled with Python, so no additional installation is required. It is designed to help beginners learn programming concepts by providing immediate visual feedback.

Key ideas to understand before moving forward:

- A **library** is a collection of pre-written code that you can use in your own programs.
- Importing a library makes its features available to your program.
- Turtle graphics use movement and rotation to draw shapes and patterns on a screen.
- Python includes built-in turtle demo programs that showcase what turtle graphics can do.

Exploring demos first helps you build curiosity and gives you a mental model of what you will later create with your own code.

Set Up

1. Make sure Python is installed and working on your computer.
2. Create a new folder for your work.
3. Inside that folder, create a new Python file named `turtle_intro.py`.

Instructions

Follow the steps below in order.

1. Open `turtle_intro.py` in your code editor.

2. Add the following line to the file:

```python
import turtle
```

3. Run the file to confirm there are no errors.

   - You should not see anything happen yet. This is normal.
   - This step confirms that the turtle library is available and working.

4. Open your command line or terminal.

5. Run the following command:

```
python -m turtle
```

6. Explore and run the different demo modes that are available to see what kinds of things turtle can do!

As you explore the demos, pay attention to:

- How the turtle moves and turns.
- The types of shapes and patterns being drawn.
- How repetition creates complex designs from simple movements.

You are not expected to understand the code behind the demos yet. The goal is to explore, observe, and become familiar with what is possible using turtle graphics.