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LAB-02

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Chapter 4:- Turtle Graphics and For Loops

The chapter explained how to use the turtle module in Python to draw shapes using line of code. The turtle starts with the center of the screen and can move forward, backward, turn left or right, and draw as it moves. I learned how to control it using commands like, turtle.forward(), turtle.right(), turtle.penup(), and turtle.pendown().
One of the most important parts of this chapter was learning how to use for loops. With a for loop, I can repeat actions multiple times without rewriting the code.
I also discovered how to change colors using turtle.color(), and how to fill in shapes using turtle.begin_fill() and turtle.end_fill(). It was fun experimenting with different colors and making the turtle draw creative patterns.
Overall, this chapter helpe me understand how looping and drawing go hand-in-hand when creating visual programs in Python.

Chapter 5:- Modules and Functions

The chapter explained what modules are and how they help organize Python pograms. A module is basically a file full of reusable code - like function and constants - that I can import into my own pograms. Some useful built-in modules I used were 'math, random and turtle'. I used 'math.pi' to access the value of π and random.randint() to generate random numbers.
I also learned how to write my own functions. Functions are blocks of code that do a specific task. Instead of repeating the same lines of code over and over, I can define a function using the 'def' keyword and call it whenever I need it. For example:

Date

Mo Tu We Th Fr Sa Su

```
def greet():
    print("Hello!")
```

Functions can take parameters (like - def add(x,y):) and even return values. Using functions makes the code easier to read and fix because each function handles one specific job.
Finally, I learned that I can create my own module by saving functions in a seperate .py file and importing them into another pogram. This is helpful for keep big projects organized. I now see how functions and modules are key to writing clean, reusable, and efficient Python code.

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