**Starry Night**

**Concepts Learned:**

* **Functions**: The draw\_star() function encapsulates the logic for drawing a star, reinforcing modularity in code design.
* **Turtle Graphics**: The turtle module is used for drawing stars with specific attributes, introducing visual programming and object manipulation.
* **Randomization**: Using randint() and random() to generate random values teaches how to add variability to graphical outputs.
* **Geometry and Angles**: The calculation of the star's angle (180 - (180 / points)) introduces geometric principles in programming.
* **Loops**: The while True loop allows continuous drawing of stars, teaching students how to create infinite loops for ongoing actions.
* **Colour Manipulation**: Random RGB colours are generated with random(), teaching how to create dynamic and varied colour schemes in graphics.
* **Coordinate Systems**: Using t.goto(x, y) teaches students how to position objects on a 2D plane by specifying coordinates.

**Key Learning Outcomes:**

* **Function design**: Learn to create reusable functions with multiple parameters to generate shapes with different properties.
* **Graphics programming**: Gain hands-on experience using turtle graphics to create visual representations and patterns.
* **Randomization in design**: Use random numbers to vary size, colour, position, and the number of points, enhancing creativity and understanding of randomness in programming.
* **Geometric calculations**: Apply basic geometric calculations to compute angles and draw complex shapes like stars.
* **Infinite loops**: Understand how to use infinite loops to repeat actions continuously, such as drawing random stars.
* **Colour creation**: Learn to generate random RGB colour values and apply them in graphical drawings.
* **Positioning in 2D space**: Practice positioning graphical objects using coordinates to understand how to control placement on the screen.