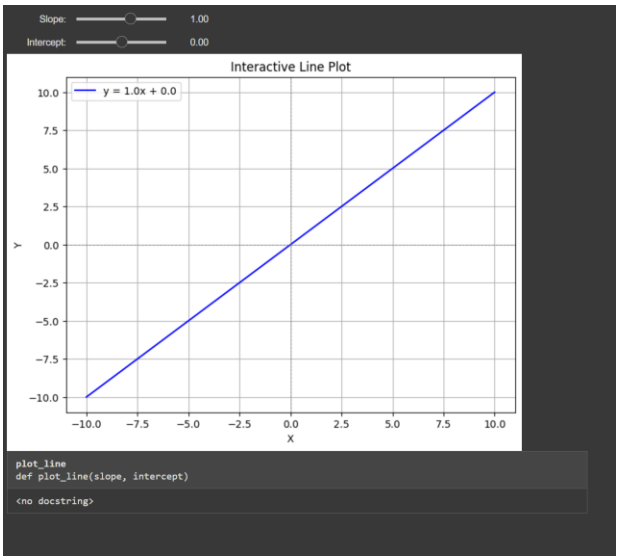
Task Report:

1. **Task Description**

- This task involves creating an interactive visualization of a linear equation in the form y=mx+b where m represents the slope and b represents the intercept. The user can adjust the slope and intercept dynamically using sliders, and the plot updates in real-time to reflect these changes. This feature is implemented using **ipywidgets** and the **matplotlib** library.

2. **Task Output Screenshot**



3. **Widget/Algorithm Used In Task**
   Algorithm/Technique Used:

- **Widgets:**
- **FloatSlider:** This widget allows the user to adjust numerical values for slope and intercept with a defined range, step size, and initial value.
- **interact:** This function from ipywidgets is used to bind the sliders to the plotting function. It ensures that any change in slider values automatically triggers a re-computation and update of the plot.
- **Algorithm for Plot:**
- A linear equation y=mx+by = mx + by=mx+b is calculated using the provided slope (m) and intercept (b).
- The numpy library generates a range of xxx-values using np.linspace.
- The corresponding yyy-values are computed based on the equation.
- The matplotlib.pyplot library is used to create and customize the plot. Features include:
- Title, labels for axes, and a legend for clarity.
- Grid lines and axis guidelines for better visualization.