Lab 3 Daily Evaluation (4 Marks)

Assume the original function is

$$f(x) = \sin^2(x)$$

- Create the Lagrange polynomial using the data points (0,0),(π/2,1),(π,0)
- Evaluate the polynomial at 10 evenly spaced x-values within the range x = 0 to x = π.
- For each x-value, calculate the error using 10 values evenly spaced between 0 and π.

$$Error = | f(x) - p(x) |$$

- Print the errors.
- Determine the average interpolation error. Print it.

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