CLL:113-Tut-6 (25.11.20)

Q1. Generate eight equally spaced points from the function $f(t) = \sin^2 t$ from $t = 0$ to 2π. Fit this data with

(a) A Lagrangian Polynomial

(b) A Newton's Divided Difference Formula

(c) A seventh-order interpolating polynomial

Plot $\sin^2 t$ as well as the interpolation functions (a), (b) and (c) for $t = [0, 0.1, 0.2, \ldots\ldots, 2\pi]$ and compare the quality of the fit obtained for each of the parts in a report.

Submission file should contain -

1. Code (.C/.CPP)
2. Report (in pdf format)