Assignment – 2

1. Write a C program to evaluate $\int_0^1 \dfrac{dx}{1+x^2}$ using Simpson's one-third rule taking h = $\dfrac{1}{4}$.

2. Write a C program to evaluate $\int_0^6 \dfrac{dx}{(1+x)^2}$ taking six sub-intervals using Simpson's one-third rule.

3. Write a C program to evaluate $\int_0^1 xe^x dx$ using Weddle's rule taking $n = 12$.

4. Write a C program to evaluate $\int_0^1 x \sin x \, dx$ using Trapezoidal rule taking $n = 10$.