CTS8233W20

CST8233: Lab #11

Numerical differentiation

Objective

The objective of this lab is to familiarize the student with the theory topics covered in Week 10. Mainly, this lab focuses on **Numerical differentiation**

Earning

To earn your mark for this lab, each student should finish the lab's requirements share his run screen within our zoom meeting.

Discussion

Write a c/c++ Program to compute the first derivative of the function $f(x)= x^3$ using forward, Backward and centered derivative numerical method

To test your program:

```
Enter the total no. of equally spaced data points:
3
Enter the value of x's :
2
3
4
Enter the point where first derivative  is calculated
3

the value of y's :
8
27
64

The result is
Forward method= 37   error = 37.04%
Backward method=19   error= 29.93%
Central = 27         error= 3.704%
```