ENG202: Numerical Methods for Engineering
Lab. Assignment 2 (A2)
Week 6 (17 Feb. – 21 Feb.), Spring 2020

Note:

- Each student has to implement **all** exercises specified in the manual.
- Create a folder using the nomenclature: A2*_yourname_yourID.*
- Create a new file in the folder for each programming exercise and name it as Exercise*X*, where *X* denotes the exercise number.
- Zip your folder and upload it to your Moodle account before the end of the lab session.
- Any queries during the lab hours should be discussed only with the Instructor/T.A.s.
- Each implementation should be done individually. Sharing your code (in entirety or partially) will be considered as plagiarism.

***Exercise 1*:** Write a program to find the double root of the following equation using Modified Newton-Raphson Method

$f(x) = x^3 - 5x^2 + 7x - 3$ for precision of $\varepsilon_s = 0.01\%$.

You should make a table similar to the one below to show your results:

Estimated root	**Number of iterations until termination**	$\boldsymbol{\varepsilon_a}$

***Exercise 1*:** Write a program to find the positive real root of the following equation using Muller's Method

$f(x) = x^3 - 0.5x^2 + 4x - 2$.