**Project Proposal**

**Program :** B.Tech. (*Information Technology and Mathematical Innovations)*

**Department :** Cluster Innovation Centre, University of Delhi

**Semester :** Vth

**Title of Paper :** Algorithms for Computational Mathematics: Numerical Methods

**Group Members :** Amit, Ashutosh Jha, Tushar Sethi

***Project 1:*** An ODE solver to calculate the orbits of the planets in our solar system/any N-body system and writing the MATLAB code that shows their position as time increases (on a 2D plot with the sun at the center and create a new graph for every delta t to simulate movement of the planets).

***Project 2***: Implementing some of the Numerical methods (Bisection, Fixed point, Regula Falsi, Secant, Newton Raphson etc.) for Root Finding with interactive graphical user interface and then analysing for the behaviour of different examples.

***Project 3:*** Making a Face Recognition system using AI and Numerical Methods. First we need to Load images and Subtract the mean face. Then we need to compute eigenvalues, which we can find Power Method and then we need to classify images and track or recognize a face accordingly (Can be implemented only in python because of lack of libraries in C)