

## **Abstract**

The Boundary value Problem (BVP) is one of the most popular subject of mathematical. We use the shooting method to apply for the solution of two points in BVP to convert them to sequences of initial value problem. We used different numerical methods for determining the numerical solutions of shooting method. One of them is the explicit Euler method and Runge-Kutta method.

The Improved Euler method is the simplest of a family of similar predictor corrector methods following the form of a single predictor step and one or more corrector steps. One subgroup of this family is the Runge-Kutta methods which use a fixed number. All the methods given can apply to higher of ordinary differential equations. The system has a complete set of initial conditions.

The simple shooting method is revisited in one of application of the shooting methods in order to solve nonlinear two point, BVP numerically. The two point, BVP is transformed into a system of nonlinear algebraic equations in several variables which is solved numerically using the Newton method.