Program consists of 6 functions:

1. main: argument is size of step. Starts 3 methods and adjusts the graph

2. exact_solution: argument is list of x points calculates the y values for the exact solution

3. function: arguments are x and y. Calculates function f(x;y) from y'=f(x;y)

4. eulers_methos: arguments are x_points - list of x points, h - size of step,X – last x point, y0 – initial value of y. Implementation of Euler's method.

5. improved_Eulers_method: arguments are x_points - list of x points, h - size of step,X – last x point, y0 – initial value of y. Implementation of improved Euler's method.

6. Runge_Kutta: arguments are x_points - list of x points, h - size of step,X – last x point, y0 – initial value of y. Implementation of Runge-Kutta method.

In implementation I used math and matplotlib libraries.

My code uses 3 methods and builds a graph that is saved as a pdf file