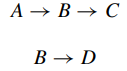
**PROBLEM STATEMENT:-**

Determine the solution to the kinetic system

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where the reaction rates are k1, k2, and k3 (in the order written here). The corresponding ODEs that you need to solve are

The initial condition is a concentration A0 and no B, C, or D. Write a MATLAB program that plots the solution up to t = 10 for k1 = 2, k2 = 0.5, k3 = 0.3, and A0 = 1

1. Solve the ODE-IVP given above or concentrations of A , B , C , D v/s time(t) for step size delta\_t=0.1 using
2. Explicit Euler
3. Implicit Euler
4. RK4
5. Find h maximum possible for numerical stability for explicit Euler.
6. Plot the concentration profiles of A,B,C,D for each of the methods
7. Plot concentration profiles for B with various step sizes delta\_t and solve by implicit euler.