Appendix C

Future scope

In this thesis, qualitative properties like existence and uniqueness of the solution of fractional order differential equations is studied and also considered Fractional order differential equation with and without impulses governing physical phenomena.

The work presented in this thesis having generalization of model of integer order differential equation to fractional order differential equation, like Model of vscoelasticity, model related to Population Growth and Gross domestic product (GDP) of any country. In different chapters of the thesis having different types of the fractional order differential equations were considered and established sufficient condition of existence and uniqueness of solution of fractional differential equation. And also studied sufficient condition in which the mild and classical solution is congruent.

If a solution of fractional differential equation model of any real world problem exists and it is found by different technique like applying the Laplace Transform, the Fourier Transform and so forth than the solution is more relevant to real world problem.