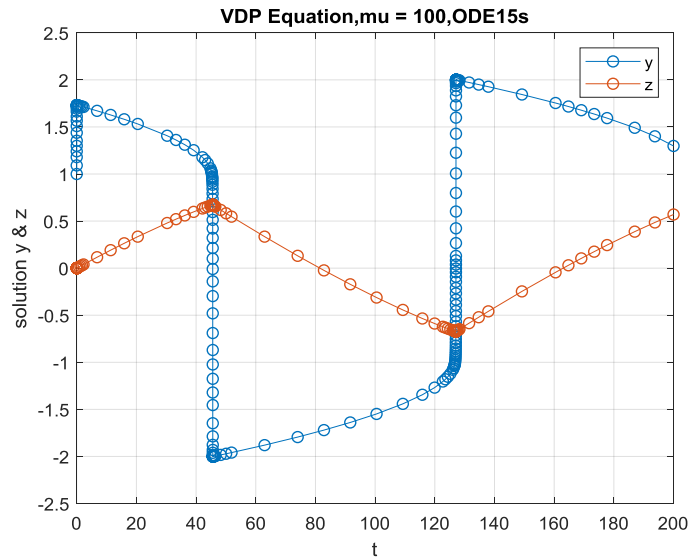
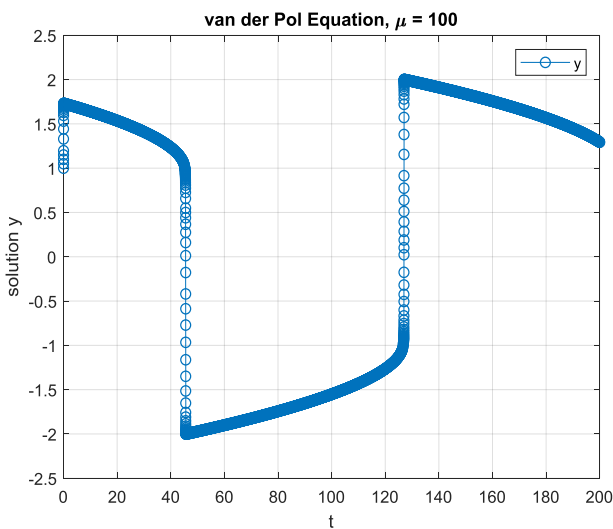
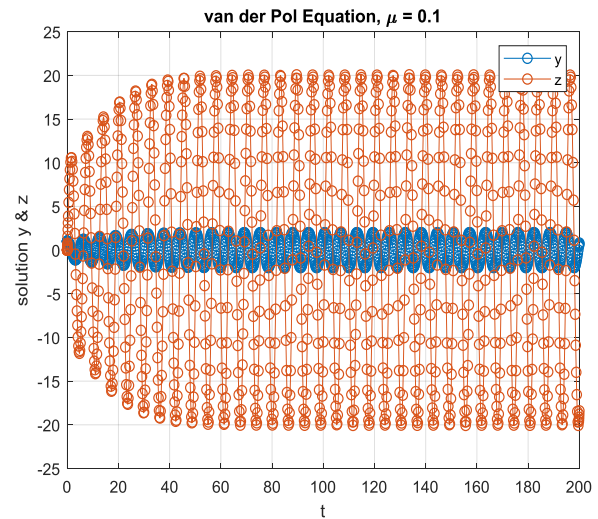
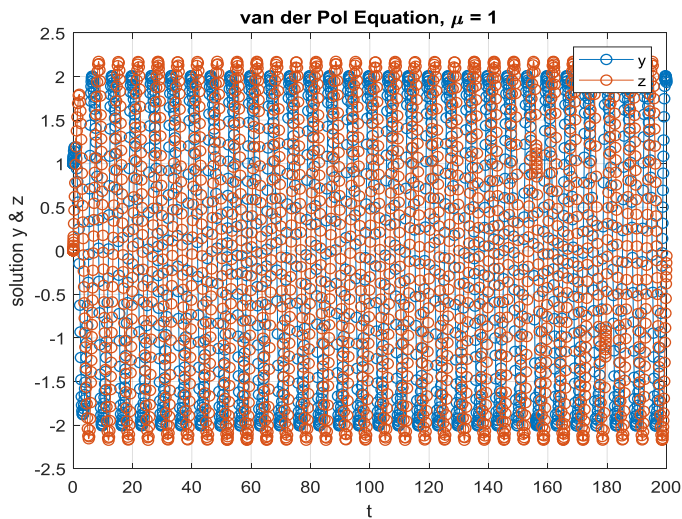


Assignment 1

Name : Mahesh Jethalia Roll Number: 15BT30036

Ans a) We substitute $z = y - y^3/3 - (dy/dt)/\mu$. Then $dy/dt = \mu(y - y^3/3 - z)$ and $dz/dt = y/\mu$.

Ans b & c) ODE15s is much faster in this case than ODE45 on the stiff problem.



Ans c) In the end, $z=0$ for multiple values of y which implies reaching steady state (as $dy/dt=0$).

