```matlab
% program to compute orbits using Newtonian gravity model

clear

G=6.7e-11;                    % gravitational constant
mEarth = 5.9742e24;           % mass of the earth
rEarth = 6.378e6;             % radius of the earth

dt = .25;             % length of each subinterval
n = 94*60/dt;         % number of subintervals to run 94 minutes

% paramters for space station orbit 402km above earth
t(1) = 0;                     % start time
x(1) = 0;                     % initial x position
y(1) = rEarth + 402000;       % initial y position
vx(1) = 7706;                 % initial x velocity for space station orbit
vy(1) = 0;                    % initial x velocity

% un-comment these parameters for elliptical orbit
%vx(1) = 10000;
%n=7*n;

% un-comment these paramters for hyperbolic orbit
%x(1) = 30000000;
%y(1) = rEarth + 5000000;
%vx(1) = -8000;

for i=1:n
    t(i+1) = t(i) + dt;           % time at start of interval i
    x(i+1) = x(i) + vx(i)*dt;   % x at start of interval i
    y(i+1) = y(i) + vy(i)*dt;   % y at start of interval i

    R = sqrt(x(i)^2+y(i)^2);  % R at start of interval i-1
    Ag = G*mEarth/R^2;          % gravity at start of interval i-1

    vx(i+1)= vx(i) - Ag*(x(i))/R*dt;  % x velocity at start of interval i
    vy(i+1)= vy(i) - Ag*(y(i))/R*dt;  % y velocity at start of interval i
end

plot(x,y)
hold on

% here we draw a circle for the earth
for j=1:101
   ang=2*pi*j/100;
   xE(j)= rEarth*cos(ang);
   yE(j)= rEarth*sin(ang);
end
plot(xE,yE)    % draw the earth
hold off
axis equal
```