

```
1 #Window setup
2 scene.range=7E7
3
4 #Objects
5 Earth = sphere(pos=vector(0,0,0), radius=6.4e6)
6 Satellite = sphere(pos=vector(7*Earth.radius, 0,0), radius=1e6)
7
8 #Parameters and Initial Conditions
9 mSatellite = 1
10 pSatellite = vector(0,5000,0)
11
12 #Time and time step
13 t = 0
14 tf = 60*60*24
15 dt = 1
16
17 #Calculation Loop
18 while t < tf:
19     rate(10000)
20
21     Fnet = vector(0,0,0)
22
23     pSatellite = pSatellite + Fnet*dt
24     Satellite.pos = Satellite.pos + (pSatellite/mSatellite)*dt
25
26     t = t + dt
27
28     #Earth Rotation (IGNORE)
29     theta = 7.29e-5*dt
30     Earth.rotate(angle=theta, axis=vector(0,0,1), origin=Earth.pos)
```