Assignment1-Q3.py

#Physics for Games Assignment 1 - Q3

#Oleksandr Kononov

#Mass of 0.5kg is actted by a force F(t)=3sin(2\*pi\*t) i N

from visual import \*

ball = sphere(pos=(0,0,0), radius=1, color=color.red)

floor = box(pos=(0,-1,0), length=50, height=1, width=10, color=color.blue)

dt = 0.01 t = 0

while 1:

rate(100)

ball.pos.x = -(3/(2\*pi\*pi))\*(sin(2\*pi\*t)) + ((3/pi)\*t)

t = t + dt

Assignment1-Q4.py

#Physics for Games Assignment 1 - Q4

#Oleksandr Kononv

#Body moving along x-axis

#a(t) = -4x(t) m/s/s

#v(0) = 0.5 m/s

#x(0) = 0m

from visual import \*

ball = sphere(pos=(0,0,0), radius=0.5, color=color.red)

floor = box(pos=(0,-1,0), length=2, height=1, width=10, color=color.blue)

dt = 0.01 vt = 0.5

while 1:

rate(100)

at = -4\*ball.x

vt = vt + at\*dt

ball.x = ball.x + vt\*dt