Exercises- Python Workshop- Day 1

1. Compute how much time it takes for the ball to reach height yc. There are two solutions because the ball reaches the height yc on its way up (t = t1) and on its way down (t = t2 > t1).

t1 and t2 where

t1=(V0− V02 -2gyc)/g

t2=(V0+ V02 -2gyc)/g

1. What is the trajectory of a ball that is thrown or kicked with an initial velocity v0 making an angle θ with the horizontal

f(x)= x tanθ− (1/ 2v2  )(gx2/ cos2 θ )+y0

Hint: g = 9.81 # m/s\*\*2

v0 = 15 # km/h --------------Convert into m/s

theta = 60 # degrees ----------Convert into radians

x = 0.5 # m

y0 = 1 # m

1. Read Sun\_hours.txt into a python program. It shows recorded temperature from year 1998 for an entire year. Compute the average number of sun hours for each month during the total data period (1998-2017). • Which month has the best weather according to the means found in the preceding task?
2. Create a dictionary to maintain it as address book with accno, name, address, phoneno (Create key as tuple and values as list) and also password. Generate password using random module