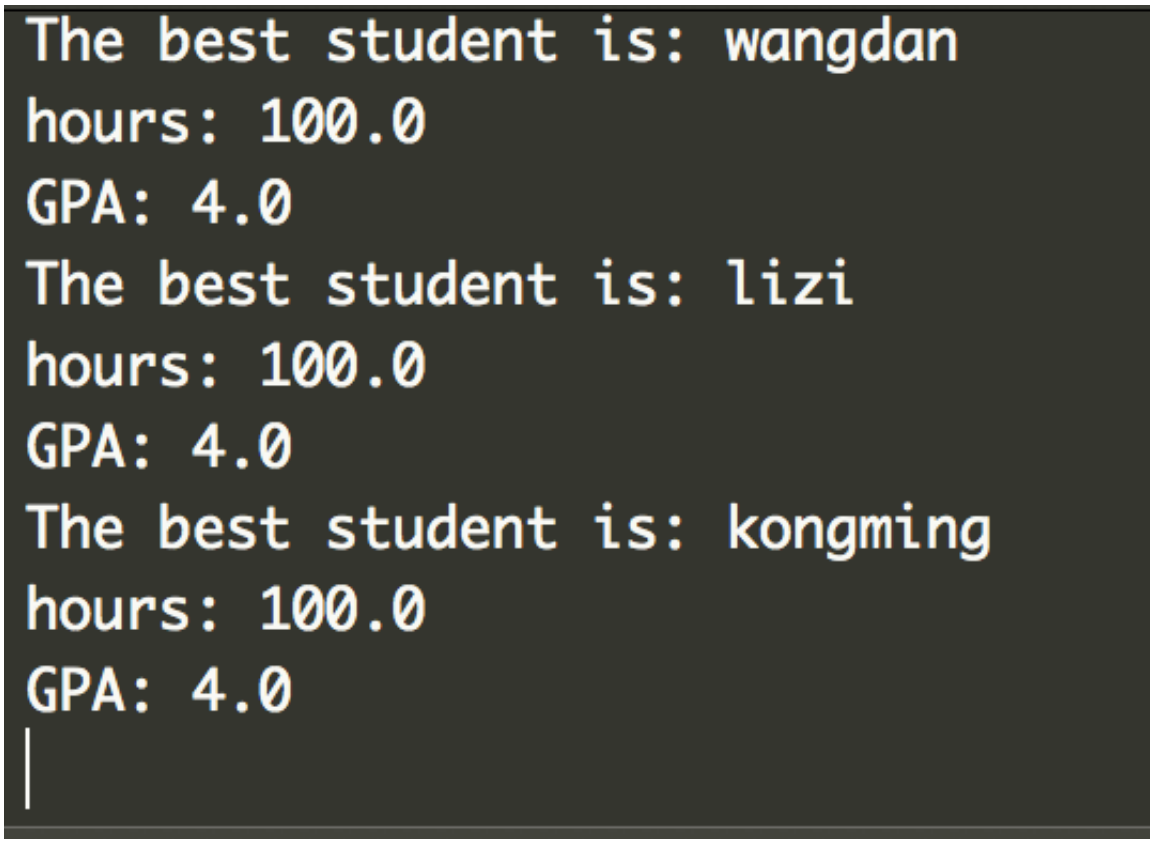
1.One unresolved issue:This program only reports back a single student. If multiple students are tied for the best GPA, only the first one found is reported. Can you to modif the program so that it reports all students having the highest GPA?

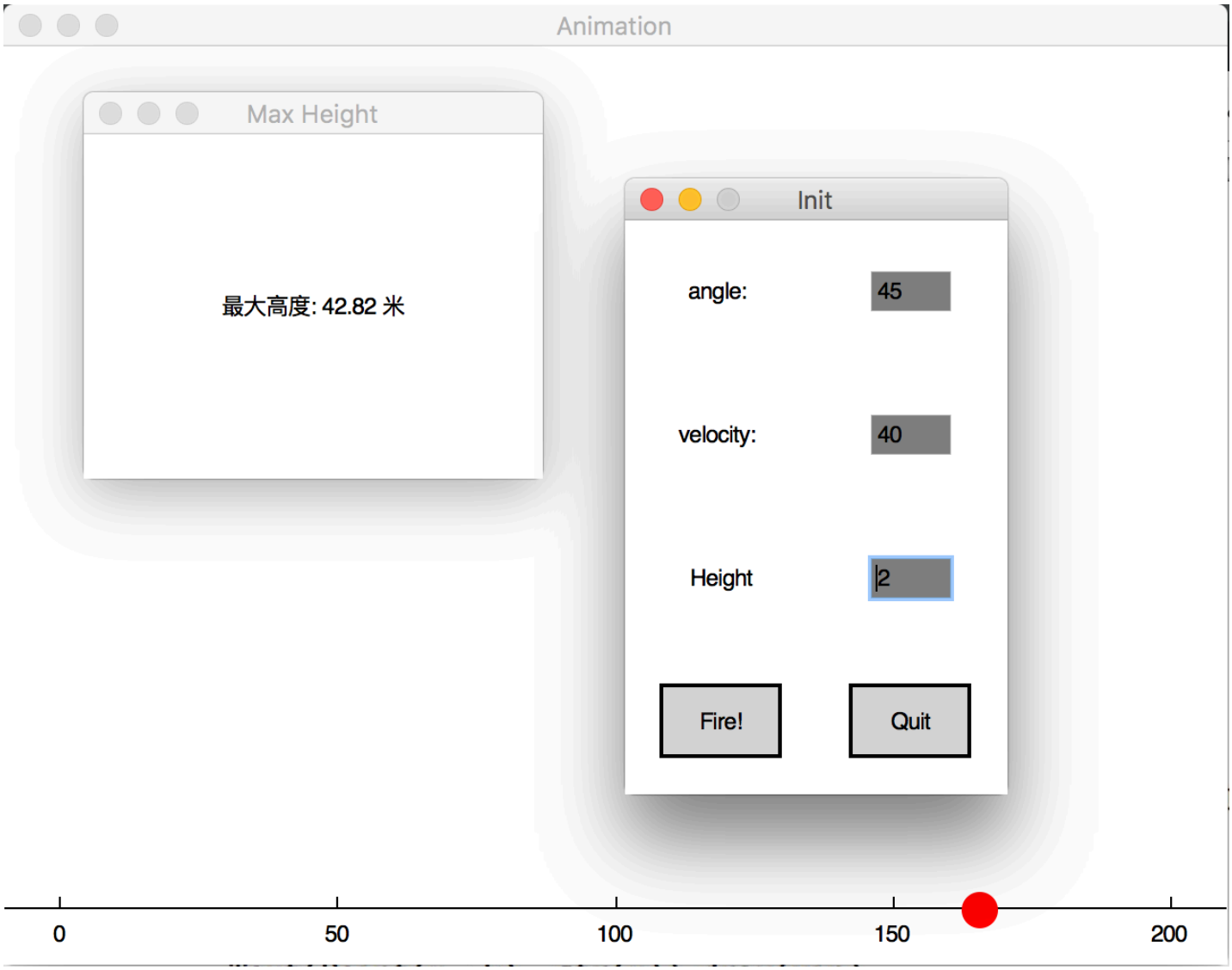
```
# gpa.py
# Program to find student with highest GPA

class Student:
    def __init__(self, name, hours, qpoints):
        self.name = name
        self.hours = float(hours)
        self.qpoints = float(qpoints)

    def getName(self):
        return self.name

    def getHours(self):
        return self.hours

    def getQPoints(self):
        return self.qpoints

    def gpa(self):
        return self.qpoints/self.hours


def makeStudent(infoStr):
        name, hours, qpoints = infoStr.split("\t")
        return Student(name, hours, qpoints)
def main():

        filename = "stu.txt"
        infile = open(filename, 'r')
        best = makeStudent(infile.readline())
        #找出最大GPA
        for line in infile:
            s = makeStudent(line)
            if s.gpa() >= best.gpa():
                best = s
        #文件引用位置重置
        infile = open(filename, 'r')
        #输出最大GPA的学生信息
        for line in infile:
```

```
            i = makeStudent(line)
            if i.gpa() == best.gpa():
                #将最后的输出语句放入if语句中，只要比当前
                print("The best student is:", i.getName())
                print("hours:", i.getHours())
                print("GPA:", i.gpa())

        infile.close()


if __name__ ==  "__main__":
    main()
```



2.Modify the cannonball simulation from the chapter so that it also calculates the maximum height achieved by the cannonball.

```
#!/usr/bin/python3
# -*- coding: utf-8 -*-

from graphics import *
from button import Button
from shot_tracker import ShotTracker
from input_dialog import InputDialog

def main():
    win = GraphWin('Animation', 640, 480, autoflush=False)
    win.setCoords(-10, -10, 210, 155)
    Line(Point(-10, 0), Point(210, 0)).draw(win)
    for x in range(0, 210, 50):
        Text(Point(x, -5), str(x)).draw(win)
        Line(Point(x, 0), Point(x, 2)).draw(win)

    while True:

        inputWin = InputDialog(45, 40, 2)
        choice = inputWin.interact()
        inputWin.close()

        if choice == 'Quit':
            break

        angle, vel, height = inputWin.getValues()
        shot = ShotTracker(win, angle, vel, height)

        while 0 <= shot.getY() and shot.getX() > -10 and shot.getX() <= 210:
            shot.update(1/50)
            update(50)
        # 显示最大高度
        maxHeight = "最大高度: %.2f 米" % shot.proj.maxY
        maxHeightWin = GraphWin('Max Height', 240, 180)
        Text(Point(120, 90), maxHeight).draw(maxHeightWin)


if __name__ == '__main__':
    main()
```


Animation
Max Height
最大高度: 42.82 米
Init
angle:
45
velocity:
40
Height
2
Fire!
Quit
0
50
100
150
200