# Worksheet 7b Interrogating a file Answers

**Task 1**

1. Complete the table below to state what each line of code does in this program:

file = open("people.txt", "r")

for loop in range (9):

line = file.readline()

data = line.split(",")

if data[2] == "Musician\n":

print(data[0],data[1])

file.close()

|  |  |
| --- | --- |
| **Code** | **Meaning** |
| file = open("people.txt", "r") | Open the file “people.txt” in read mode and assign it to the variable “file” |
| for loop in range(9): | Repeat the next section nine times |
| line = file.readline() | Read the next line from the file and store it in the “line” variable |
| data = line.split(",") | Split the contents of the “line” variable and store individual fields in a list called “data” |
| if data[2] == "Musician\n": | Check to see if the value of data[2] (what they are famous for) is “Musician”. This is the last field in the record so it contains a newline character \n |
| print(data[0],data[1]) | Print the values of data[0] (first name) and data[1] (last name) |
| file.close() | Close the file |

1. The file **albums.txt** lists the artist, title, year released, genre and sales (in millions) of the 15 biggest selling albums of all time (according to Wikipedia, September 2014).

(a) This program will print out some of the details of the first album in the list.  
Write in the missing two lines to complete the program.

file = open("albums.txt", "r")  
line = file.readline()  
file.close()  
data = line.split(",")  
print("Artist: ",data[0])  
print("Title: ",data[1])  
print("Year: ",data[2])

print("Genre: ",data[3])  
print("Sales: ",data[4])

Now test the program.

(b) Adapt the previous program so that it will print out just the artist and the album name from the third line of the data file.

file = open("albums.txt", "r")  
line = file.readline()  
line = file.readline()  
line = file.readline()  
file.close()  
data = line.split(",")  
print("Artist: ",data[0])  
print("Album: ",data[1])

OR

for loop in range(3):  
 line = file.readline()

etc

(c) Write a program that will scan through all 15 albums and will print out the names of all the Rock albums.

file = open("albums.txt", "r")  
for loop in range(15):  
 line = file.readline()  
 data = line.split(",")  
 if data[3] == "Rock":  
 print(data[1])  
file.close()

(d) Write a program that will print out the title and year released for each album by the Eagles.

file = open("albums.txt", "r")  
for loop in range(15):  
 line = file.readline()  
 data = line.split(",")  
 if data[0] == "Eagles":  
 print(data[1],data[2])  
file.close()

(e) Write a program that will print out the title and total sales for each album if it is either Country or Soundtrack.

file = open("albums.txt", "r")  
for loop in range(15):  
 line = file.readline()  
 data = line.split(",")  
 if data[3] == "Country" or data[3] == "Soundtrack":  
 print(data[1],data[4])  
file.close()

(f) Write a program that will add up the total sales for all 15 albums.

total = 0  
file = open("albums.txt", "r")  
for loop in range(15):  
 line = file.readline()  
 data = line.split(",")  
 total = total + float(data[4])  
file.close()  
print("Total Sales: ",total, "million")

***(See Python program L7 WS7b Task 1 Albums.py in Sample programs folder)***

**Task 2**

3. 9 lines are printed. Miley,Cyrus,Musician is the first line printed

4. Just the surnames. (Actual printout given below)

Read files into a list first, then find the number of elements in the list

There are 9 records in the list

Cyrus

Pitt

Murray

Dogg

Watson

Flintoff

Sugar

Beckham

Ennis

***(See Python program L7 WS7b Task 2 Reading a text file.py in Sample programs folder)***