# Worksheet 8 Writing to a file Answers

**Task 1**

1. Write a simple program that will ask for your first name, then your last name and then your date of birth. The program should then write all three values to a file, each value separated by a comma.

firstName = input("Enter first name: ")  
lastName = input("Enter last name: ")  
DoB = input("Enter DoB: ")  
file = open("details.txt","w")  
file.write(firstName + "," + lastName + "," + DoB + "\n")  
file.close()

1. Adapt your previous program so that it will write each value to a new line.

firstName = input("Enter first name: ")  
lastName = input("Enter last name: ")  
DoB = input("Enter DoB: ")  
file = open("details.txt","w")  
file.write(firstName + "\n")  
file.write(lastName + "\n")  
file.write(DoB + "\n")  
file.close()

1. Write a program that will use a loop to ask for 5 names. Enter the names of 5 of your classmates. Each name should be stored on a new line.

file = open("classmates.txt","w")  
for loop in range(5):  
 name = input("Enter the name of a friend: ")  
 file.write(name + "\n")  
file.close()

1. Write a program to store information about the people in your class. First it should ask how many people you want to collect data for. The program should use a loop to ask for each person’s name, favourite band and favourite food. The data should be stored in a file with each value separated by a comma and with each person’s details on a new line.

The program should then close the file, reopen it for reading and print out all the records in the file.

number = int(input("How many details do you want to store? "))  
file = open("classmates.txt", "w")  
for loop in range(number):  
 name = input("Enter the name of a friend: ")  
 band = input("Enter their favourite band: ")  
 food = input("Enter their favourite food: ")  
 file.write(name + "," + band + "," + food + "\n")  
file.close()  
file = open("classmates.txt","r")  
for loop in range(number):

line = file.readline()

data = line.split(",")

print(data[0],data[1],data[2])

file.close()

What will happen if the user enters a non-numeric value for the number of people?

If the user enters a non-numeric value for the number of people, the program will crash.

***See program L8 WS8 Ex4 write classmates data v1.py and***

***L8 WS8 Ex4 write classmates data v2.py in Sample programs folder***

1. Adapt the previous program so that instead of asking how many friends you want to store, the program will keep asking until enter the name “STOP”.

classFile = open("classmates.txt","w")

name = input(“Enter the name of a friend: “)  
  
while name.upper() != "STOP":  
 band = input("Enter their favourite band: ")  
 food = input("Enter their favourite food: ")  
 classFile.write(name + "," + band + "," + food + "\n")  
 name = input(“Enter the name of a friend: ”)  
classFile.close()

classFile = open("classmates.txt", "r")

for line in classFile:

print(line)

***See program L8 WS8 Ex5 read and write classmates.py in Sample programs folder***

**Extension**

1. Write another program that will interrogate the data about your friends. It should ask you to choose a band and then list the names of all the friends from the file who like that band.
2. Adapt the previous program to allow the user to select whether they want to search by favourite band or by favourite food.

6-7 Many potential solutions, provide feedback based on success of student solution.

**Task 2 Appending data to a file**

1. Write a simple program that will create a completely new file for storing high scores. The program should ask you to enter your name, the date and your high score. Each value should be separated by a comma.

file = open("highScores.txt", "w")  
name = input("Enter name: ")  
date = input("Enter date: ")  
score = input("Enter score: ")  
file.write(name + "," + date + "," + score + "\n")  
file.close()

1. Amend the program, if necessary, so that it will let you add a new high score to your file without overwriting any previous high scores. Each record should be stored on a new line in the text file.

file = open("highScores.txt", "a")  
name = input("Enter name: ")  
date = input("Enter date: ")  
score = input("Enter score: ")  
file.write(name + "," + date + "," + score + "\n")  
file.close()

1. Adapt your program from question 2 so that once you have entered a high score you will be asked if you want to add another one. If you say yes then the program should run again.

file = open("highScores.txt", "a")  
again = True  
while again == True:  
 name = input("Enter name: ")  
 date = input("Enter date: ")  
 score = input("Enter score: ")  
 file.write(name + "," + date + "," + score + "\n")  
 again = input("Add a new score? (y)es or (n)o: ")  
 if again == "y":  
 again = True   
file.close()

1. By using the programs you have already written, create one single program with the following menu options:
2. Display High Scores
3. Add A New High Score
4. Clear All High Scores
5. Quit

The program should continue until the user chooses option **4**.

menu = "1. Display high scores\n\  
2. Add a new high score\n\  
3. Clear all high scores\n\  
4. Quit"  
  
choice = None  
  
while choice != "4":  
 print(menu)  
 choice = input("Enter choice: ")  
 if choice == "1":  
 file = open("highScores.txt", "r")  
 contents = file.read()  
 print(contents)  
 file.close()  
 elif choice == "2":  
 file = open("highScores.txt", "a")  
 name = input("Enter name: ")  
 date = input("Enter date: ")  
 score = input("Enter score: ")  
 file.write(name + "," + date + "," + score + "\n")  
 file.close()  
 print("Score saved")  
 elif choice == "3":  
 file = open("highScores.txt", "w")  
 file.close()  
 print("Scores reset")  
print("Goodbye! ")

***See program L8 WS8 Ex11.py in Sample programs folder***

**Extension**

12. Add another option so that the user can see only the highest high score.  
…

elif choice == "4":

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

maxScore = 0

maxName = “”

for line in file:

data = line.split(",")

highScore = data[2]

if int(highScore) > int(maxScore):

maxScore = highScore

maxName = data[0]

file.close()

print("Highest high score is", maxName, maxScore)

***See program L8 WS8 Ex12.py in Sample programs folder***