

Programming – DT282/1 & DT228/1

Lab 18 – Tuesday, March 21st, 2017

Note: You are expected to finish all programs in your own time if you do not get these done during the lab session. This is your own responsibility.

Structures (part 2)

Remember: Use Symbolic names in your programs. Do not hard-code.

Write separate programs to:

1. Chapter 12 – Q2 (see below)
2. Using Structures, write a program to do the following:

Design structure templates to store data as follows:

Airline name, Flight number, Passenger surname, Seat number, destination, no of bags

Using functions, your program must:

- a) Enter the travel information for 3 passengers
 - b) Display the data for each passenger
3. Using Structures, write a program to do the following:
 - Design structure templates incorporating the use of nested structures to store biographical data about a person.

Your program must:

- a) Enter data for a person's firstname, surname, date of birth, height, weight, eye colour & country of citizenship
 - b) Display the data entered
 - c) Copy the data and store it in a 2nd person's record and then modify it.
 - d) Display the new data for the 2nd person
4. Copy the program from Q3. Modify this so that you use an array to store data for 3 people instead of 3 separate variables for each person.
5. Write a program that uses a Structure to store the following details for a city:
 - City name

- Population
- Annual rainfall (mm)
- Annual sunshine (hours)

Enter the above details for 2 different cities. Using pointer notation only, display the details entered. Also, calculate the city with the highest annual rainfall and the city with the lowest annual sunshine.

2. Given the following:

```
struct data
{
    int a ;
    float b ;
} ;
struct data d, *p = &d ;
```

write statements that assign 1 to a and 2.3 to b, using

- (a) the . operator
- (b) the -> operator
- (c) the * operator.