Chapter: File Operation

This exercise is intended for students to:

1. apply file processing techniques to solve a related problem
2. classify the scenario in applying the file processing technique

LAB EXERCISE 1

Tasks:

T-Shirt4U is an online business company that sells muslimah t-shirt in Malaysia. The company has appointed you to develop a sale analysis system. System is intended to facilitate the manager to analyze sales record. The sales record in given to you with the information as shown in the input file named **sales.txt** as in Figure 1. The price of the muslimah t-shirt is RM50.00/piece.

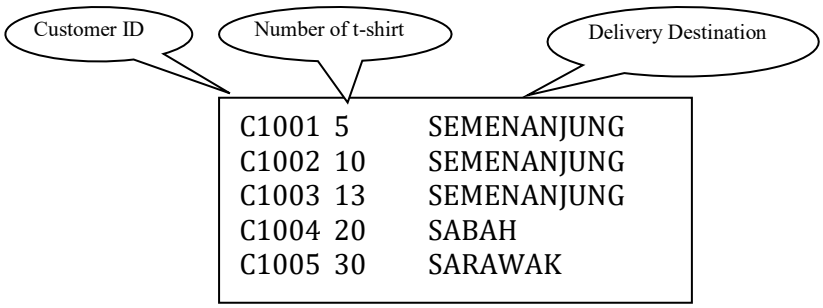

Figure 1: sales.txt file

The company will give 5% discount if the customer buys more than 5 pieces, 10% discount for more than 10 pieces, 20% discount for more than 15 pieces and 30% for more than 20 pieces.

The t-shirts will be delivered by using courier all over Malaysia. For SEMENANJUNG, the company will charge RM3.00 per piece and for SABAH/SARAWAK will be charged RM8.00 per piece.

After all the process, the system will print out the processed information in an output file. Figure 2 is the example of output file with the processed information.

SALES RECORD

Customer_ID	T-Shirt	Discount	Total_Price	Destination	Postage_Fare	Total_Fare
C1001	5	0.00	250.00	SEMENANJUNG	15.00	265.00
C1002	10	25.00	475.00	SEMENANJUNG	30.00	505.00
C1003	13	65.00	585.00	SEMENANJUNG	39.00	624.00
C1004	20	200.00	800.00	SABAH	160.00	960.00
C1005	30	450.00	1050.00	SARAWAK	240.00	1290.00

Total Sales: 3644.00

Figure 2: salestatistic.txt file

Your system would have a few functions such as **main**, **calculate_discount, calculate_postage** and etc**.**

a. Based on the problems and user requirement given construct a flowchart or pseudocode to indicate the flow of sale analysis system.
b. Translate the flowchart or pseudocode into full free error coding.

Hints: functions, 2-D Array, File.

LAB EXERCISE 2

Tasks:

Airspeed Airline is a domestic airline company. Airspeed has appointed you to develop a sale analysis system. System is intended to facilitate the manager to analyze the sales record. You are given an input file named **sale.txt** that consists of the following information as in Figure 1.

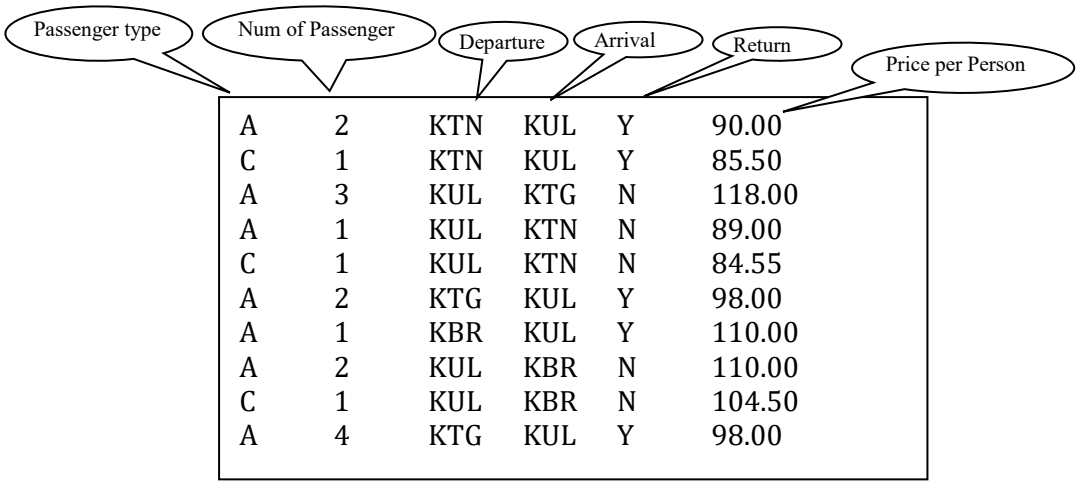

Figure 3: sale.txt file

Your system should allow the following functions with the following processes:

1. In main function:
    a. Read the information line by line (in array).
    b. Call function total fare to get total fare for each line. You must pass the value of return and price per person to the total fare function in order to calculate the total fare.
    c. After you get all the total fare from the total fare function, the output will be written **in the output file as shown in Figure 2.**
2. In total fare function:
    a. This function will calculate **the discount of 5% if return in Y**.
    b. Total fare will be calculated based on **price after discount x number of passenger**.
    c. The value of price after discount and total fare will be returned to the main function.

SALES RECORD

Passenger_Type	Bil	Price/person	Return	Price After Discount	Total_Fare
A	2	90.00	Y	85.50	171.00
C	1	85.50	Y	81.23	81.23
A	3	118.00	N	118.00	354.00
A	1	89.00	N	89.00	89.00
C	1	84.55	N	84.55	84.55
A	2	98.00	Y	93.10	196.00
A	1	110.00	Y	104.50	104.50
A	2	110.00	N	110.00	220.00
C	1	104.50	N	104.50	104.50
A	4	98.00	Y	93.10	372.40

Total Sales:1776.68

Figure 4: salestatistic.txt file

Your system would have a few functions such as **main** and **total_fare.**

c. Based on the problems and user requirement given construct a flowchart or pseudocode to indicate the flow of sale analysis system.
d. Translate the flowchart or pseudocode into full free error coding.

Hints: functions (main, read_price, calculate_discount, total_fare), 2-D Array, File.