**ATAR course examination, 2023**

**Semester 1, Unit 1**

**COMPUTER SCIENCE**

**SOURCE BOOKLET**

**Refer to the information that follows to answer Questions in Section Two of the Question/Answer booklet.**

**Refer to the information below to answer Questions 21 through to 23**

A major airline has contracted Surins Catering to supply their first-class passengers with in-flight meals. The Airline requires passengers to use an online system from Surins directly.

This is a significant boost in turnover to their business and Surins Catering need to re-locate and establish new systems to meet this new demand.

In the first instance, Surins Catering will develop a way to authenticate a user of their new online booking system. They have hired a programmer who has advised that the following data structure be used.

FILENAME = ‘PassengerRecord.txt’

Here is some of the data will be stored.

**Figure 1: PassengerRecord.txt**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field type | Number | Last name  String | First name  String | Password  String |
| Record | 384 | Collins | Ivy | BlackCat4 |
| Record | 385 | Brown | Leon | GoneFishing2 |

Surin’s Catering has strong relationships with it’s main suppliers within the region. It has negotiated discounts with all suppliers based on a minimum monthly spend of $1,000.

The data for these discounts for each key supplier is recorded as follows:

**Figure 2: Supplier Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Supplier** | Sumrice | ChickenRite | VegeAction | TunaRite | Morspice |
| **Supplier Code** | SMR | CKR | VGA | TNR | MRS |
| **Discount** | 10% | 15% | 10% | 7.5% | 8.5% |

A previous programmer has stored this key data into two arrays

supplier\_Code[4]: Array of str

supplier\_Discount[4]: Array of real

They have also written the following:

Module CalcDiscount(supplier\_Code[ ], supplier\_Discount[ ], OrderDiscount)

Input(Supplier Code)

*To be written*

End module

Module Calc\_OrderTotal(Quantity, Item\_cost, Total)

*To be written*

Function Discounted\_Total(OrderDiscount, Total)

*Code to be completed*

**Main Module**

Input(Quantity, Item\_cost)

Call CalcDiscount(Supp\_Code[ ], Supp\_Discount[ ], OrderDiscount)

Call Calc\_OrderTotal(Quantity, Item\_cost, Total)

Output Call Discounted\_Total (OrderDiscount, Total)

End

**See next page**

The company has purchased a new building for their expanded operations. There is some existing network infrastructure in place that the previous owners had installed before closing their business down. Surins Catering pad for this infrastructure in their sale price.

Here is a model of the buildings existing network.

**Figure 3: Network Layout Diagram**

Diagram

Description automatically generated

**End of source booklet**