**DEPARTMENT OF ICT, CFS IIUM**

**SEMESTER 2, SESSION 2021/2022**

**ICT0525 – INTRO. TO PROGRAMMING**

**ASSIGNMENT 2 (35 marks = 10% of carrymark)**

**SANCTUARY RESORT PACKAGES**

Sanctuary Resort has four types of room packages. The following table describes each of the room packages.

|  |  |  |
| --- | --- | --- |
| **Package type** | **Package description** | **Rate per day (RM)** |
| 1 | Penthouse Suite | 980.00 |
| 2 | THREE-rooms Apartment | 750.00 |
| 3 | TWO-rooms Apartment | 550.00 |
| 4 | Studio Suite | 420.00 |

(**NOTE:** Store **Rate** in **global arrays -1D Array**)

|  |  |
| --- | --- |
| **Booking Type** | **Code for Booking Type** |
| Online Booking | 1 |
| Counter/phone call | 2 |

A government tax of 5% will be imposed on each successful booking. For those who make online booking, a 10% discount will be given, otherwise no discount received.

Your program should contain the functions requirements as stated below:

1. **Requirements for the source code:**
2. The program file **MUST** start with the following information:

/\*

Student Name: xxxxxxx Matric No: xxxxxxx

Section No: xxx

Date: DD/MM/YYYY

Program Title: (Assignment 2: Sanctuary Resort Packages)

\*/

1. main() function

* Get the selection details which are package type, no. of days and booking type.

1. Calculate() function

* Receives package type and no. of days.
* Calculates gross price (declare gross price as a global variable).
  + gross price=rate per day X no of days
* Calculates and returns the tax amount to main().

1. CalculateDiscount() function
   1. Receives booking type and calculate the discount amount
   2. Return the discount amount to main().
2. Display() function
   1. Receives package type, tax amount and discount amount from main() .
   2. Display package description (use case statements).
   3. Display the gross price.
   4. Display tax and discount.
   5. Calculate and display the net price.

**Sample output 1:**

|  |
| --- |
| WELCOME TO SANCTUARY RESORT  Enter package type (1-4): 2  Enter no. of days: 2  Enter booking type (1 or 2): 2  Booking Details:  ---------------------  3 Rooms Apartment  Price RM1500.00  Tax RM75.00  (Discount) RM0.00  --------------------------------  NET PRICE RM1575.00  --------------------------------  Process exited after 27.24 seconds with return value 0  Press any key to continue . . . |

**Sample output 2:**

|  |
| --- |
| WELCOME TO SANCTUARY RESORT  Enter package type (1-4): 4  Enter no. of days: 3  Enter booking type (1 or 2): 1  Booking Details:  --------------------  Studio Suite  Price RM1200.00  Tax RM60.00  (Discount) RM120.00  --------------------------------  NET PRICE RM1140.00  --------------------------------  Process exited after 10.11 seconds with return value 0  Press any key to continue . . .Press any key to continue . . . |

The submission must be made through i-Ta’Leem:

|  |  |
| --- | --- |
| **Item** | **Method** |
| Flowchart – Draw a flowchart for main () program and function CalculateDiscount() only. **(10 marks)** | * Draw on paper, then scan the flowchart as pdf file. * Save the file as:   + ***SectionNo\_A2\_FirstName.pdf***   + Example: ***406\_A2\_Roslina.pdf***   \*\*You may also save as an image file |
| Program source codes.  **(25 marks)** | * Use a compiler to type/compile/run the source codes. * Save the file as:   + ***SectionNo\_A2\_FirstName.c***   + Example: ***406\_A2\_Roslina.c*** |

*(NOTE: Please ensure that you name the files using the given format.)*

**MORE INFO**

1. Assignment 2 covers chapter 1 until 5, and will be evaluated based on the following components:

|  |  |
| --- | --- |
| **Components** | **Mark** |
| Flowchart | 10 |
| Source Codes | 25 |
| TOTAL  (10% of carry mark) | 35 |

1. This is an open book test.
2. You have TWO HOURS to accomplish this test.

ALL THE BEST!!