Shinas College of Technology
SULTANATE OF OMAN

INFORMATION TECHNOLOGY DEPARTMENT

Mini-Project

(To cover the outcomes by *Self-reliant, Student Centered Learning Approach*)

Level:	Diploma I	Specialization:	Information Technology
Course Code:	ITSE 101	Course Name:	Programming 1
Date of Issue:	October 24, 2020	Date of Submission:	December 24, 2020
Assignment Number and Title:	1. Oman Air Ticketing System		
Group:	3		

Instructions:

1. E-mail your assignment to ***myra.patalay@shct.edu.om***. No hardcopy or softcopy from USB is accepted for security purposes.
2. After sending your assignment, secure the copy of the sent mail (see *Sent Items*) as evidence until you get the confirmation of receiving from your course lecturer. If you don't get any confirmation in one (1) or two (2) days, send it again and follow-up personally.
3. No updated versions are accepted once the assignment is submitted.
4. Write your ID, Course Title, and Section in the Subject of your mail.
   (Example: *S01234_ Programming1_3*)
5. Use only your college mail to send your work. Contact ETC in case you have a log-in problem.
6. Marks will be deducted for late submission. Twenty percent (20%) of assignment scored mark will be reduced for each day of late submission.
7. Plagiarism is a crime. Plagiarism occurs when other's work such as print material, images, audio-visual creations, computer programs, electronic materials, etc. are used without appropriate acknowledgement and this can be checked by copying your work to any search engines.

   Plagiarism includes, but not limited to the following:

   - Copying full or part (paragraphs, sentences or significant part of a sentence) of other's work directly
   - Copying from other's work with an end reference to the original source but without putting the copied text between quotation marks
   - Paraphrasing, summarising, or rearranging words, phrases or ideas of other's work
   - Copy-Paste of statements from multiple sources (electronic or print material)
   - Presenting work done in collaboration with others as independent work
   - Using one's own work presented previously

   Disciplinary Action for Student Plagiarism (for ALL involved) is Zero mark.

   To avoid plagiarism, you must give credit whenever you use:
   a. another person's idea or theory;
   b. any piece of information which is not a common knowledge; *and*
   c. Material from a website.

A student who satisfactorily completes the mini project should be able to:

1. Define concepts of programming.
2 Use data types, variables, constants and operators;
3. Use input/output statements, conditional statements and loop control structures and string manipulation.
4. Create program using lists.
5. Create program using built-in and user-defined functions.
6. Compile, debug and run programs successfully

SCENARIO-BASED PROBLEM:

Oma Air, hired you to develop a new system for their ticketing transactions. You were requested to create a program that will compute the total bill, service tax and the mileage points of the customers.

The program will start by entering the number of transactions. The number of transactions will determine the number of times the users will enter the inputs: Transaction Type, Number of Passengers and Customer Mobile Number.

Store the inputs in lists including the mileage points, service tax and the bill.

You are also required to use functions to compute for the following:

Bill is equals to the product of number of passengers and the ticket amount.

Service tax is computed as 6% of the bill.

Computation for mileage points is based on the table below:

Transaction Type	Number of Transactions	Transaction Amount	Mileage Points
N	1 – 2	300 OMR	5% of the bill
	More than 2	275 OMR	7.5% of the bill
B	1 – 2	600 OMR	8% of the bill
	More than 2	450 OMR	12% of the bill

You are required to display in a tabular listing the following: transaction type, number of transactions, Bill, Service Tax and Mileage points.

The following should also be displayed:

a. The number of times Transaction type '**N**' is entered by the user.
b. The total of all the computed bill.
c. A list of all the mileage points sorted in desceding order (lowest to highest)

Rubrics:

No.	Criteria	Marks
1	Adopting coding standards (Naming, indents, alignment, comments, Spacing)	1
2	Handling appropriate directives (for input and output process)	1
3	Handling of Values using List	2
4	Input Processing	2
5	Processes (Accuracy of calculations/manipulations)	5
6	Output Handling	1.5
7	Program executes satisfying the requirements completely	1
8	Use of functions (minimum of three functions)	1.5
	Total	**15**

Sources of Information/References:

1. Proquest Reference 1- John Paul Mueller. Beginning Programming with Python for Dummies. Edition 1. John Wiley & Sons, Incorporated. Retrieved from https://ebookcentral.proquest.com/lib/momp/detail.action?docID=1775471&query=python
2. Textbook1- Charles R. Severance (2016), Python for Everybody. Exploring Data Using Python 3. Open Education Resource, Creative Commons Attributions (CC-BY-NC-SA 3.0). Retrieved from http://do1.dr-chuck.com/pythonlearn/EN_us/pythonlearn.pdf
3. Textbook2 - Swaroop C H(2013). A Byte of Python. Open Education Resource, Creative Commons Attributions (CC BY-SA 4.0).Retrieved from https://python.swaroopch.com/
4. Texbook3 - Alan B. Downey (2016). Think Python: How to think Like a computer Scientist. Open Education Resource, Creative Commons Attributions (CC BY-NC 3.0). Retrieved from http://greenteapress.com/thinkpython2/thinkpython2.pdf
5. Reference Book1- Richard Baldwin (2016), ITSE 1359 Introduction to Scripting Languages: Python. OpenStax CNX. Open Education Resource, Creative Commons Attributions (Attribution 4.0 International CC-BY-4.0). Retrived from https://cnx.org/contents/lrNEBZVi@32.49:au9KiwIF@5/Itse1359-1010-Getting-Started
6. Relevant website Reference
https://eng.libretexts.org/Bookshelves/Computer_Science/Book%3A_Python_for_Everybody_(Severance)
RW2 - http://introtopython.org/

Prepared by:

Myra M. Patalay
Course Coordinator

Approved by:

Amna Al-Kaabi
HOS, IT