TAYLOR'S

SCHOOL OF PRE-UNIVERSITY STUDIES
FOUNDATION PROGRAMMES

PRACTICAL TEST 1 (SET 5) / 10%
AUGUST 2022 SEMESTER

MODULE NAME	: INTRODUCTION TO ALGORITHM
MODULE CODE	: ITS30705
TIME	: 1 HOUR

This paper consists of <u>FOUR (4)</u> printed pages.

Student Name   **Student ID**

Tutorial Group

Instruction to Candidates:

1. Answer all questions in the paper and the answers are to be written in either black or dark blue pen.
2. This is a closed book examination, no notes are permitted.
3. Non-programmable electronic calculators may be used.
4. Severe disciplinary action will be taken against those caught violating examination rules.

Question 1 (3 Marks)

Write a Python program that ask the user for a non-negative integer and check whether the number is even or odd.

Question 2 (5 Marks)

Write a Python program that ask user to enter a price that calculate the tax of the price which is 6.5%. The program only ends when the user enters -1.

Question 3 (5 Marks)

Write a Python program that accept number of semesters and the CGPA that will print whether the user is a Dean List student or Honor students. If the users do not fall in any range, then display message "Not listed".

Number of Semester	CGPA	Identified As
1 – 2	3.00 – 3.49	Honor Students
1 – 2	3.50 – 4.00	Dean List
3 – 4	3.00 – 3.74	Honor Students
3 – 4	3.75 – 4.00	Dean List

Question 4 (5 Marks)

Given a list of dictionaries of student name and their study status. Write a Python program code that access the dictionary and list the student where their status is ongoing.

Expected Input:
```
employee_list = [{"student_name":"Sarah","status":"ongoing"},
                 {"student_name":"Jonathan","status":"graduate"},
                 {"student_name":"Dylan","status":"graduate"},
                 {"student_name":"Benjamin","status":"ongoing"},
                 {"student_name":"Alice","status":"graduate"},
                 {"student_name":"Rosa","status":"ongoing"}
                 ]
```
Expected Output:
```
The list of employees that preferred to work onsite >>
1. Sarah
2. Benjamin
3. Rosa
```

Question 5 (7 Marks)

Write a Python program where the program asks the user to input how much they spend for each month and the program will stop when the user enter "done". Write a function called *average_spending* that takes all the input entered and calculate the average spend and calculate the number of month that they spend above average.

Expected output:

```
Type in the money spend for each month or "done" to finish
Month 1 Spend: 300.50
Month 2 Spend: 290.44
Month 3 Spend: 103.56
Month 4 Spend: 89.32
Month 5 Spend: 43.21
Month 6 Spend: done

Average Spend = 165.41
2 month spend above average.
```

Question 6 (5 Marks)

Using recursion function, write a Python program that calculate the sum of a list numbers.

Expected Input:
```
list_num = [90, 34, 67, 12, 59]
```

-–— END OF TEST PAPER —--