Worksheet 1

University of Edenberg
CSE114 - Programming with Python
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Task 1

```
# File: chaos.py
# A simple program illustrating chaotic behaviour.
print(”This program illustrates a chaotic function”)
x = eval(input(”Enter a number between 0 and 1: ”))
for i in range(10):
    X = 3.9 * X * (1 - X)
    print(x)
```

Modify the chaos program so that the number of values to print is determined by the user. You will have to add a line near the top of the program to get another value from the user:

```
n = eval(input(”How many numbers should I print? ”))
```

Then you will need to change the loop to use n instead of a specific number.

Task 2

A certain CS professor gives 100-point exams graded on the scale: 90-100:A, 80-89:B, 70-79:C, 60-69:D, <60:F. Write a program that accepts an exam score as input and prints out the corresponding grade.

Task 3

An *acronym* is a word formed by taking the first letters of the words in a phrase and making a word from them. For example, RAM is an acronym for ”random access memory.” Write a program that allows the user to type in a phrase and then outputs the acronym for that phrase. Note: The acronym should be all uppercase, even if the words in the phrase are not capitalised.

Task 4

Write a program that counts the number of words in a sentence entered by the user.

Task 5

A certain college classifies students according to credits earned. A student with less than 7 credits is a Freshman. At least 7 credits are required to be a Sophomore, 16 to be a Junior and 26 to be classified as a Senior. Write a program that calculates class standing from the number of credits earned.

Task 6

Create a Python program to manage a list of favourite movies. Implement the following functionalities:

1. Add Movie: Add a new movie to the list.
2. View Movies: Display all the movies in the list.
3. Remove Movie: Remove a movie from the list by its name.
4. Search for a Movie: Check if a specific movie is in the list.

Example Interface

```
1. Add Movie
2. View Movies
3. Remove Movie
4. Search for a Movie
5. Exit
Enter your choice:
```

Submission Requirements:

1. This worksheet will not contribute to your continuous assessment.
2. Submit all your programs in separate .py files, clearly labelling each file (e.g., task1.py).
3. Ensure your code is free of errors and runs without issues.
4. Submit your code in a zipped file to alinani10@gmail.com