

Machine Learning

Q1: Lists:

- a) Create an empty list and populate it with integers.
- b) Perform the following operations on the list:
 - 1. Add an element at the beginning and end of the list.
 - 2. Remove an element from the list by its value.
 - 3. Sort the list in ascending order.
 - 4. Check if a specific element exists in the list.
 - 5. Display the final list after each operation.

Q2: Tuples:

- a) Create a tuple of your favorite foods.
- b) Access and print the elements of the tuple.
- c) Convert the tuple to a list and modify one of the elements.
- d) Convert the modified list back to a tuple.
- e) Display the final tuple.

Q3: Sets:

- a) Create two sets containing random integers.
- b) Perform set operations on the sets, including union, intersection, and difference.
- c) Determine if one set is a subset or superset of the other.
- d) Display the results of each operation.

Q4: Dictionaries:

- a) Create a dictionary with keys representing fruits and values representing their prices.
- b) Add new key-value pairs to the dictionary.
- c) Access and print the value of a specific key.
- d) Modify the value of an existing key.
- e) Delete a key-value pair from the dictionary.
- f) Display the final dictionary after each operation.

Assignment 3

Q5: You are given a dataset containing information about employees in a company. The dataset includes the following fields for each employee: employee ID (integer), name (string), department (string), and salary (float).

Using Python data structures:

- a)** Create a list called "employees" and populate it with three employee records, each represented as a dictionary. Each dictionary should contain the fields mentioned above.
- b)** Calculate the average salary of all employees in the "employees" list and print the result.
- c)** Convert the list of employees into a set called "unique_departments" to obtain a set of unique department names.
- d)** Create a tuple called "highest_paid_employee" and assign the details (dictionary) of the employee with the highest salary to it.
- e)** Display the final "employees" list, "unique_departments" set, and "highest_paid_employee" tuple.

Note: You can create dummy data for the employee records for this question.

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Note:

- Assignment Submitted in **Pdf From**
- Write a python script that includes the code for each task.
- Include comment in your code to explain the purpose functionality of each step.
- Send it in this email id:
jtechsolution93@gmail.com

Assignment 3

- You can take help from ChatGPT but at the end.
- If Any, then It is highly recommended, if you read **research papers for assignment.**

Helping Website for research papers are:

<https://scholar.google.com/>

<https://sci-hub.hkvisa.net/>