Day 7 : Date 21/03/2024

Lists in python

* What is a list
* List Creation in python
* List Operations
  + List Accessing and indexing
  + List Unpacking
  + Slicing items from a list: list[from:to] , here ‘to’ is inclusive
  + Modifying lists: list[index] = “new item”
  + Checking items in a list: “item” in list

Day 8: Date 22-03-2024

Lists in python

* List Operations
  + Adding/Inserting items to a list : list.append(), list.insert().
  + Removing Items in a list: list.remove(item), list.pop(), del list
  + Clearing List items : list.clear()
  + Copying list : list.copy()
  + Extending / Concatinating Lists: list1 + list2, list1.extend(list2)
  + Counting items in a list: list.count(“item”)
  + Finding Index of an item: list.index()
  + Reverse list: list.reverse()
  + Sorting list: list.sort(), list.sorted()

Day 9 : Date : 26-03-2024

Tuples in Python

* What is tuple?
* Creating tuples
* Tuple Operations
  + Tuple Length – len(tuple\_name)
  + Accessing tuple items
  + Slicing tuples
  + Changing tuples to list : list(tupleName)
  + Checking item in a tuple : “item” in tupleName
  + Concatinating Tuples : tuple1 + tuple2
  + Deleting Tuples : del tupleName

Day 10: Date : 27-03-2024

Sets in Python

* What is set?
* Creating sets
* Operations on sets
  + Accessing set items
  + Checking set items
  + Adding items in set: add(), update()
  + Removing items from a set: remove(), discard(), pop(), clear(), del
  + Converting list, tuple to set
  + Joining Sets: union(), isdisjoint()
  + Intersection of set items: intersection()
  + Subset and Superset: issubset(), issuperset()
  + Difference between sets: difference()
  + Symmetric difference: symmetric\_difference()

Day 11: Date : 01/04/2024

Dictionaries in Python

* What is a Dictionary
* Creating a dictionary – {} or dict()
* Operations on Dictionary
  + Length of Dictionary: len()
  + Accesssing dictionary items: dictionary[‘keyvalue’], dictionary.get(‘Keyvalue’)
  + Adding items to a dictionary: dictionary[‘keyvalue’] = value
  + Modifying items in a dictionary: dictionary[‘existingKeyValue’] = newValue
  + Checking Keys in a Dictionary: using ‘in’ operator
  + Removing Key values pairs from a dictionary: dictionary.pop(‘keyName’), dictionary.popitem(), del

Day 12: Date: 02/04/2024

Dictionaries in Python

* Operations on Dictionary [continution]
  + Changing Dictionary to a list of items: items()
  + Clearing a Dictionary: clear()
  + Deleting a Dictionary: del dictionaryName
  + Copy a Dictionary: dictionary.copy()
  + Getting Dictionary keys as a list: dictionary.keys()
  + Getting Dictionary valules as a list : dictionary.values()

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| **Day and Date** | **Brief Description of the daily activity** | **Learning Outcome** | **Person In-Charge** |
| Day 1  Dt. 21/03/2024 | Week 2 of our internship started with the core concepts of python, where we started learning about the concept of lists and how they organize the data, and certain operations that make python to handle the data efficiently. | * List Definition * List Creation * List Operations * Accessing items and indexing items. * Unpacking, Slicing, Modifying, list items. |  |
| Day 2  Dt. 22/03/2024 | On the second day of week, we dived deeper into the concept of lists in python, and gained a better understanding in other core list operations. This emphasized the efficient use of lists in managing data in organized manner. | * Appending & Inserting List items. * Removing & Clearing items in list. * Concatenation, Counting, Copying, Extending list items and lists. * Reversing, Sorting, the lists |  |
| Day 3  Dt. 26-03-2024 | On third day, we discussed tuples in python. Tuples are similar to lists in python but they are immutable, i.e. the items which are stored in tuples are not possible to update/change. We also gained the key insights about the differences between the list and set. | * Tuple Definition, Tuple Creation * Tuple Operations * Accessing, Slicing, tuple items * Concatenating, checking tuples items & finding length of tuples * Deleting Tuples |  |
| Day 4  Dt. 27-03-2024 | On this day, we learned Sets in Python, like how to create set, core operations on sets like, accessing, checking, adding items to and from a set, and other also include like intersecting, union of sets, removing, differences between sets etc.. | * Set Definition, Set Creation * Set Operations like- * Accessing, Checking, Adding, Set items. * Joining sets – Differences, Symmetric Differences between sets. |  |
| Day 5  Dt.01-04-2024 | On the fifth day, we learned about dictionary in python, and it emphasized their role in storing key-value pair values, and their mutability of storing and organizing the data for an efficient access. | * Definition, Creation of Dictionary * Dictionary Operations * Accessing, Adding, Modifying, Checking Removing items based on key-value pairs in a dictionary. |  |
| Day 6  Dt. 02-04-2024 | On the final day of week 2, we continued to learn the other core operations of dictionary in python, that can emphasize the organization of data in an efficient manner, and its usage in real life perspectives. We also gained a practical exposure of primary dictionary operations. | * Converting Dictionary to List * Clearing, Copying, Deleting, the dictionary * Getting Dictionary Keys as a list * Getting Dictionary Values as a list * Looping through Dictionary items |  |