

Artificial Intelligence

F24 AI & MMG

LAB#03



Lab Objectives

Tuple

Dictionaries

Functions



Tuple

Tuples is collection of objects
like list in python

Unlike lists tuples are
immutable

Whenever you want to create a
collection that shouldn't change
you should go for tuples

Tuple Objectives

- Creating a tuple
- Accessing elements of a tuple
- Trying to update tuple
- Removing elements from a tuple
- Checking if a value exists in tuple
- Traversing a tuple





Dictionary

- It is a key value pair
- Each key value pair is called an item
- Dictionaries are mutable

Dictionary Objectives

- Creating elements in dictionary
- Accessing elements from a dictionary
- Updating elements of a dictionary
- Adding new elements
- Removing elements from a dictionary
- Checking if a key exists
- Getting keys and values
- Merging Dictionaries



Functions



Function is a block of code, which takes certain input (arguments may not be necessary) processes it and produces some output (print or return)



Functions provide modularity and reusability

Function Objectives



Defining and
calling functions



Function
Arguments



Return Values
from a function



Global keyword

LAB TASKS

TASK 01: Create a function which takes tuples of tuples as input (containing at least 7 tuples), where each tuple contains: name and age of a person, this function returns a new tuple which contains only the names of those persons whose age is greater than 20

TASK 02: Create a function which takes a number as input and determines two things:

- Whether the number is even/odd
- Greater than 5, as a bool

LAB TASKS

TASK 03: Create a function which stores the information about books in Library:

- Each book has title,author,publication year and genre
- Use a dictionary to store information about the books
 - Where keys are the book titles
 - Values are title,author,publication year and genre as a tuple
- Write Separate functions for:
 - Searching a book and display it's information
 - Adding a new book
 - Deleting a book with given key