

## Assignment 1: Python for AI/ML/DS

July 11, 2022

[Submission URL](#)

Submission Deadline: 12/07/2022, 2.30 PM

### Topic: Lists, tuples, sets, and dictionaries

#### 1. Using Python convert a tuple to a dictionary

*Input: ((1, "Hello"), (2, "World"))*

*Output: {"Hello": 1, "World": 2}*

#### 2. Write a Python code to find the number of occurrences of each word in a given string (words are separated by spaces and case-sensitive)

*Input: Today we learned tuples and we learned dictionaries and we learned string*

*Output:*

*Today 1*

*we 3*

*learned 3*

*tuples 1*

*and 2*

*dictionaries 1*

*string 1*

### Topic: Loops

#### 3. Write a function to print the given number in the Fibonacci series using for loop and while loop

*Input: fibonacci(9)*

*Output: 34*

**Also, find the golden ratio using it**

*Output: 1.618*

### Topic: Function and packages

#### 4. Write a function to calculate the median of a given list

a. Without using any package

b. With using a package (e.g. NumPy)

*Input: [77, 78, 85, 86, 86, 86, 87, 87, 94, 98, 99, 103]*

*Output: 86.5*