

OOP_PCOM7E September 2022 Object Oriented Programming

Unit 7: Debugging / Error Handling, Data Structures and Data Search

Discuss the ways in which data structures support object-oriented development. Use examples of three different data structures to contextualise your response.

OOP means the using of object as a basic unit and how them interact and affecting each others.

Each object contains attributes which much has their respective data structure. Also the method in each class of objects will also return a particular data structure. Therefore data structure is fundamental to OOP development. Here are some example of data structure:

Tuple
List
Dictionary

Tuple is the storing of various items in one variable. Items in it is ordered, unchangeable, and allow duplicate values.

List is also a data structure of storing multiple items in one variable that called a list. It is similar to Tuple but it is mutable while tuple is immutable.

Dictionary is data structure that accommodated an indexed list of items, i.e. each item has a key which can be used and assign by the programmer. Tuple and List also ahs index but depends on the position and the key is not assignable.

As in OOP, each class of object will have a set of their own attributes. Programs that are written using OOP should have a set of data belongs to the same object to be handled. Tuple, list and dictionary are several built-in data structure in Python that is readily available that helps to facilitate the handling and operating these attributes in an object.