

INTRODUCTION TO C#

SOFTWARE EVOLUTION

- Machine Language
- Assembly Language
- Procedure Oriented
- Object-oriented Programming

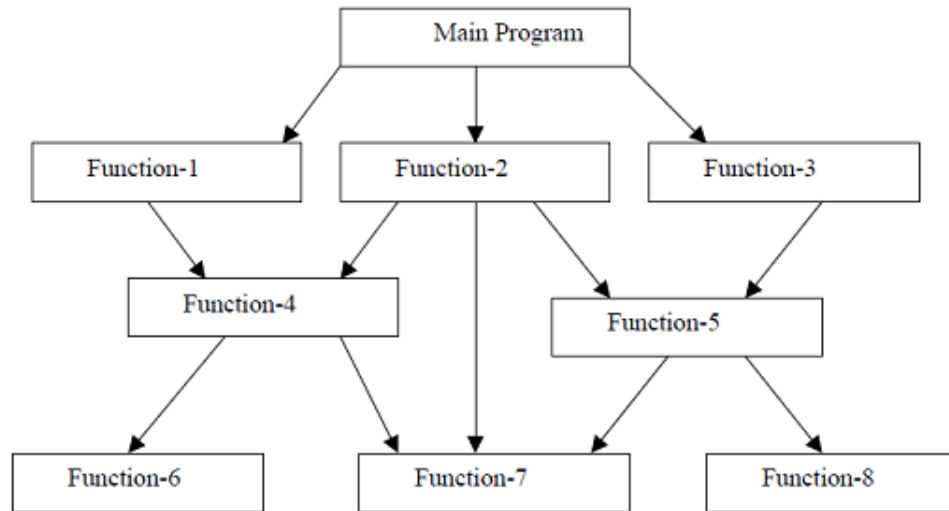
INTRODUCTION TO C#

- C# is pronounced "C-Sharp".
- It is an object-oriented programming language created by Microsoft that runs on the .NET Framework.
- C# has roots from the C family, and the language is close to other popular languages like C++ and Java.
- The first version was released in year 2002. The latest version, C# 9, was released in September 2020.

WHY USE C#

- It is one of the most popular programming language in the world
- It is easy to learn and simple to use
- It has a huge community support
- C# is an object-oriented language which gives a clear structure to programs and allows code to be reused, lowering development costs.
- As C# is close to C, C++ and Java, it makes it easy for programmers to switch to C# or vice versa

PROCEDURE ORIENTED PROGRAMMING

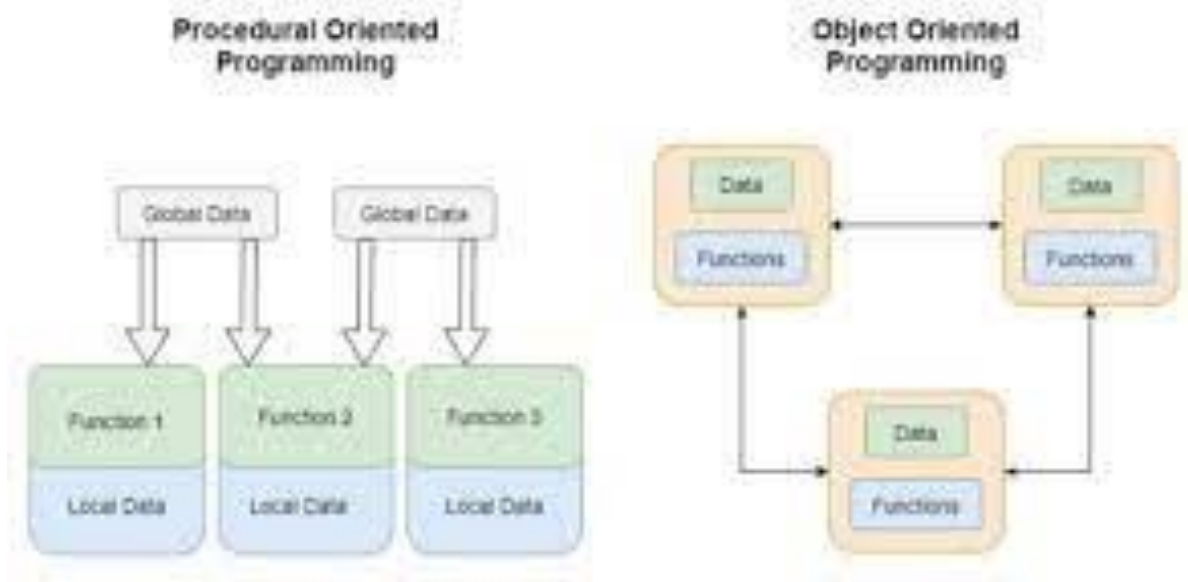


Structure of procedural oriented programs

- Emphasis on doing things
- Large programs are divided into smaller known functions
- Most functions share Global data
- Data move openly around the system

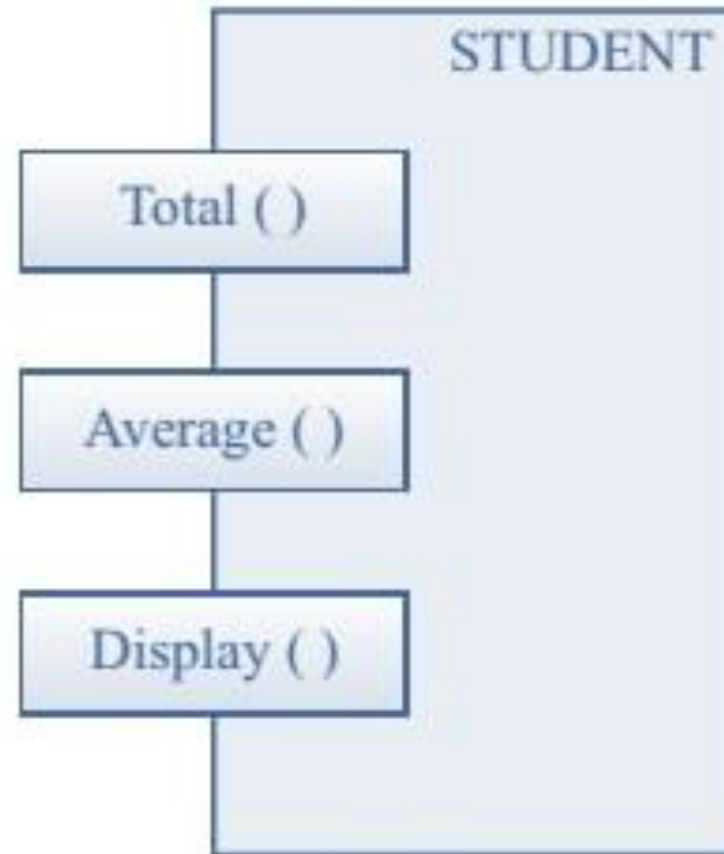
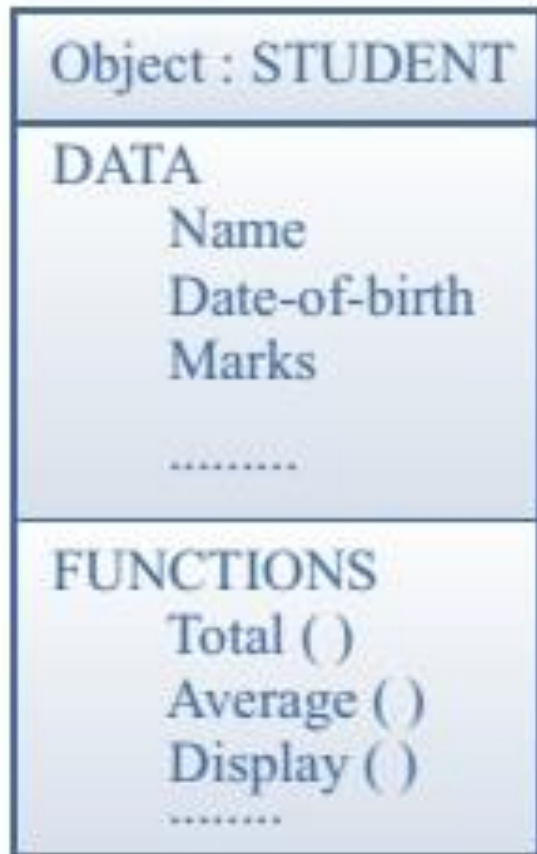
OBJECT ORIENTED PROGRAMMING PARADIGM

- OOP is a programming paradigm based upon objects
 - having both data and methods
- Advantages of modularity and reusability.
- Objects, are instances of classes
- Object are used to interact with one another to design applications and computer programs.



FEATURES OF OBJECT-ORIENTED PROGRAMMING

- Bottom-up approach in program design
- Programs organized around objects, grouped in classes
- Focus on data with methods to operate upon object's data
- Interaction between objects through functions
- Reusability of design through
 - creation of new classes
 - by adding features to existing classes



OBJECT

Fig. : Two ways of representing an object

CLASSES

- User defined data type for objects are created with help of class
- Objects are variables of the type class
- Class – Fruit
- Object
 - Mango
 - Orange
 - Apple

MESSAGE PASSING

- Message for an object is request for execution of procedure
- Function invoked will generate the desired result

