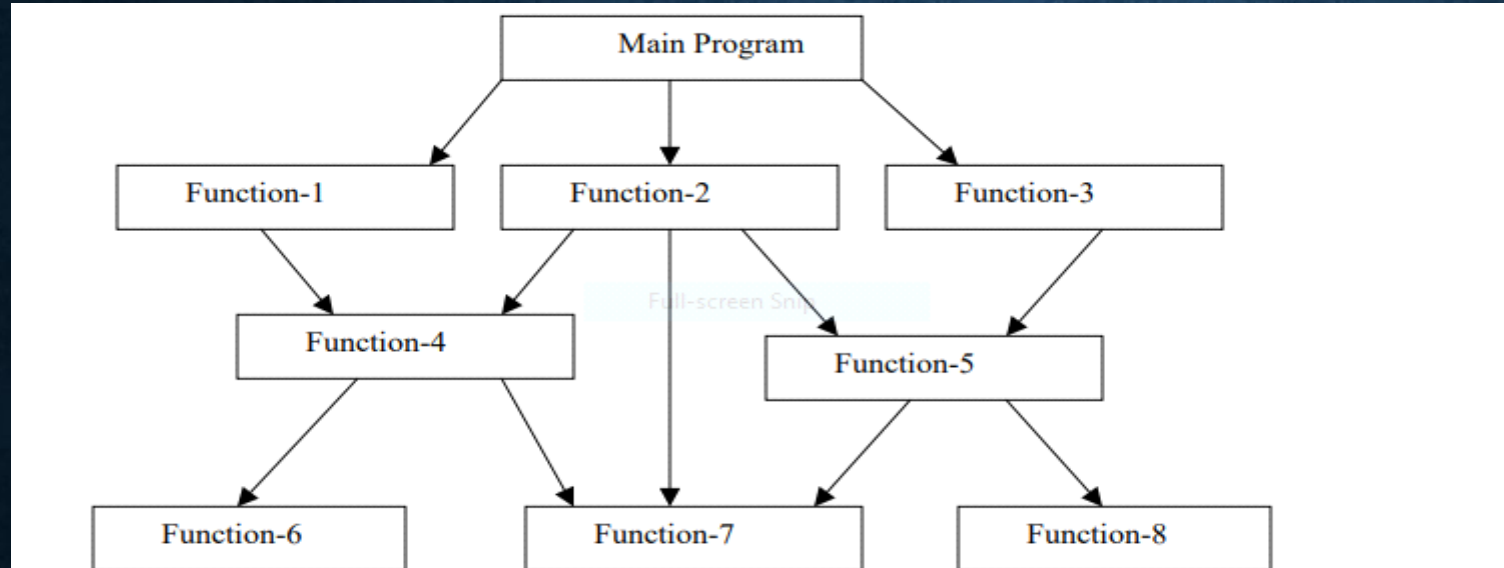# OBJECT-ORIENTED PROGRAMMING

OOP

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WHAT IS PROCEDURAL PROGRAMMING AND OOP ?

Procedural programming is about writing procedures or functions that perform operations on the data, while object-oriented programming is about creating objects that contain both data and functions

Object-oriented programming has several

- 1 / OOP is faster and easier to execute

- 2 / OOP provides a clear structure for the programs

- 3 / OOP helps to keep the C++ code DRY "Don't Repeat Yourself", and makes the code easier to maintain, modify and debug

- 4 / OOP makes it possible to create full reusable applications with less code and shorter development time

Tip: The "Don't Repeat Yourself" (DRY) principle is about reducing the repetition of code. You should extract out the codes that are common for the application, and place them at a single place and reuse them instead of repeating it.

C++ WHAT ARE CLASSES AND OBJECTS?

Classes and objects are the two main aspects of object-oriented programming.

Look at the following illustration to see the difference between class and objects :

Class → Fruit

Object → Apple , Banana , Mango

Class → Car

Object → Volvo , Audi , Toyota

Class: STUDENT

DATA

Name

Date-of-birth

Marks

FUNCTIONS

Total

Average

Display

Objects in College Management Program

College Environment

Student   Course   Teacher

Section   Hall   Office

So, a class is a template for objects, and an object is an instance of a class.

When the individual objects are created, they inherit all the variables and functions from the class.

You will learn much more about classes and objects in the next chapter

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