UNIT III

EMBEDDED FIRMWARE DEVELOPMENT ENVIRONMENT

3.4 Object Oriented Language and C++

Object- oriented language features

_defining of the object or set of objects ,which are common to similar objects within a program and between the many programs,
_ defining the methods that manipulate the objects without modifying their definitions, and
_ Creation of multiple instances of the defined object or set of objects or new objects

Object-oriented language

_Inheritance
_ over loading of functions
_ over riding of functions

_Data en capsulation ,and
_Design of reusable components

Object Characteristics

1. An i*dentity* (a reference to a memory block that holds its state and behavior).
2. A *state* (its data, property, fields and attributes).
3. A *behavior* (method or methods that can manipulate the *state* of the object).

Procedure oriented language

Procedure oriented language A large program in _C‘ splits into the simpler functional blocks and statements ._C‘ is called procedure oriented language.

Object Oriented Language Characteristics

• A large program in objected oriented language C++ or Java , splits into the logical groups (also known as ***classes***).
• Each class defines the data and functions (methods) of using data.
• Each class can inherit another class element.
• A set of these groups (classes) then gives an application program of the Embedded System
• Each group has internal user - level fields for data and has methods of processing that data at these fields
• Each group can then create many objects by copying the group and making it functional.
• Each object is functional. Each object can interact with other objects to process the user's data.
• The language provides for formation of classes by the definition of a group of objects having similar attributes and common behavior. A class *creates the **objects.*** **An object is an instance of a class.**