

What is PLDT?

It stands for Programming logic and design tools. It is a process in which we write any problems according to requirement with the help of development tools, such as algorithm and flowchart.

Computer programming language

It is a special language in which a user is initiated/communicated with a computer system. It is a collection of grammatical rules and mathematical symbolic as "+", "-", "*", "/" etc.

Its main objective is to write program for performing a special task according to requirement language are available in market such as :- C, C++, Java, PHP, .NET(VB. net, c#. net, ASP.net) etc.

There are two types of programming language:

- i) Low level programming language
- ii) High level programming language

i) Low level programming language: It is a machine oriented language that is used to develop system software such as OS, Compiler, Interpreter, Linker, Loader, Network drivers etc.

It can be classified into two parts:

- a. Machine level language/binary language
- b. Assembly language

Machine language: It is only special language that is understood by computer. It needs the extensive knowledge of computer hardware for writing this language.

Example- $10 + 20 = 30$ can be written as:

$$1010 + 10100 = 11110$$

Advantage:

- i) It's execution is fast.
- ii) It is used in system programming.

Disadvantage:

- i) It is difficult to learn.
- ii) Debugging is complex.

Note: Debugging- The process to remove the error in programming.

Assembly Language: In this language we use mnemonics(special symbol) for writing programs.

Mnemonics can be : ADD, SUB, MULTI, DIV etc.

Example: $10 + 20 = 30$ can be written as:

1010 ADD 10100 EQUAL 11110

Advantage:

- i) It is simple and easy to learn.
- ii) Time taking is less.
- iii) Debugging is fast.

Disadvantage:

i) Execution speed is slow because it needs a translator as a compiler or Interpreter.

Programming Techniques:

Types of programming techniques:

- a. Procedural Programming
- b. Object Oriented Programming

Procedural Programming

It is the traditional method that is used to reduce the complexity of a program. In this case a large program can be divided into more than one part. That part is called functional, module, subroutine, method etc.

Example -> A calculator program may be divided into several modules as :- find add(), find sub(), find multi(), find div(), etc. These modules perform operation separately.

Function is used to implement procedural / programming.

Example -> OBASIC, C, COBOL, FORTRAN, PASCAL etc. are the example of procedural programming.

Object oriented programming

It is the latest programming technology that reduces the complexity of program using class, object, inheritance, polymorphism, encapsulation etc. Its main objective is to provide reusability. It means ones written source code can be reused multiple times according to requirement.

Eg -> C++, Java, PHP, .NET(VB.Net , C#.Net, ASP.Net) are example of object oriented programing.