# Programming Fundamentals

**1.Scripting and Markup Language:**

Programming can be categorized into three basic types. They are as follows

* Programming Language
* Scripting Language
* Markup Language

Programming languages are used to create source code and they must be compiled before creating a executable file.

Some examples of Programming languages are **C, C++, C#, Java**. Scripting languages are also a part of programming language. But in scripting Language it doesn’t need to complied before giving to other system. Some of the examples of scripting languages are **JavaScript, PHP, Python**. Markup language is used to design the web page.

1. **Statically and Dynamically typed languages:**

In **statically typed** language variable must be declared before using the variable. Since the declaration is done at compile time the language exhibits this behaviour is called statically types language. This is type safe, Memory is optimized and Slower development cycle.

In Dynamically typed languages no need to declare a variable it can be assigned at runtime. Type Error is more, Lass Optimized, and fast development time.

**3.Compiled and Interpreted languages:**

Compiled language have source code in our computer. We can compile it and give a executable code to another computer. It can be executed in other computer. Interpreted languages can be compiled with other computer by copying it.

**4.Package Managers:**

Package Managers is used to install required packages and dependencies. There are two types of package managers are available.

* Os Based Package Managers - Windows,Linux ,Mac Based
* Language Based Package Managers - Javascript or Python

**5.Strongly Typed languages:**

Have to declare the data type before using it. These type of languages are strict to datatypes of any variable.Some examples are C,C++ and Java.

**Weekly Typed languages**

Data type of this programming is dynamic. That can be automatically defined by the program itself no need to declare it.