**JAVA PROGRAMING LANGUAGE**

**History of java:** Java, having been developed in 1991, is a relatively new programming language. At that time, James Gosling from Sun Microsystems and his team began designing the first version of Java aimed at programming home appliances which are controlled by a wide variety of computer processors. The original name of this language was Oak, until it was discovered that a programming language already existed that was named Oak. As the story goes, after many hours of trying to come up with a new name, the development team went out for coffee and the name Java was born.

**Features of java:** The features of java are also called buzzwords. And they include

Simple, object-oriented, portable, platform independent, secure, architectural neutral, dynamic, Multithreaded.

**Efficiency:**

**Coverage:** codeCover, Emma, hansel, jacoco,jcov,serenity BDD

**C++ PROGRAMMING LANGUAGE**

**History of C++:** In 1979 Bjarne Stroustrap, a Danish computer scientist received the motivation for creating a new language originated from his experience in programming for PhD. Thesis. Stroustrap found that simula had features that were very helpful for large software development, but the language was too slow for the particle use, while BCP2 was fast but too low level to be suitable for large software development. At the start of stroustrap work in AT & T Bell labs, he had the problem of analyzing the UNIX KERNEL with respect to distributed computing. Remembering his Ph.D. experience, stroustrap set out to enhance the C language with simula like features. In 1983 C with Classes was renamed to C++ being the increment operation in C.

**Features of C++:** Object oriented, Platform, Simple, High-level programming language, Compiler based

**Efficiency:**

**Coverage**: Bullseye coverage, Froglogic coco, Intel c++ compiler IS.O, Parasoft Jtest, Vector software

**R PROGRAMMING LANGUAGE**

**History of R:** R was created by Ross Ihaka and Robert Gentleman at the University of Auckland, New Zealand, and is currently developed by the R Development Core Team (of which Chambers is a member). R is named partly after the first names of the first two R authors and partly as a play on the name of S. The project was conceived in 1992, with an initial version released in 1995 and a stable beta version in 2000.

**Features of R :** R is a well-developed, simple and effective programming language, R provides a large, coherent and integrated collection of tools for data analysis.**,**R provides a suite of operators for calculations on arrays, lists, vectors and matrices, R has an effective data handling and storage facility.

**Efficiency of R:**

**Coverage of R:** Covr**,** Exclusions, Function exclusions**,** Line exclusions

**PYTHON PROGRAMMING LANGUAGE**

**History of Python:** Python laid its foundation in the late 1980s.The implementation of Python was started in the December 1989 by Guido Van Rossum at CWI in Netherland.In February 1991, van Rossum published the code (labeled version 0.9.0) to alt.sources.In 1994, Python 1.0 was released with new features like: lambda, map, filter, and reduce.Python 2.0 added new features like: list comprehensions, garbage collection system.

**Features of python:** Easy to Learn and Use**,** Expressive Language**,** Cross-platform Language**,** Object-Oriented Language**,** Large Standard Library

**Efficiency of Python:**

**Coverage of python:** Coverage.Py**,** Pytest**,** Pytest.cov**,** Unites

**ASP.NET PROGRAMMING LANGUAGE**

**History of ASP.NET:** ASP.NET evolved from traditional ASP. ASP stands for active server pages. Microsoft enhanced this web technology and embedded it in its revolutionary .NET framework. Initially two beta releases of ASP.NET were released in 2000 and 2001. In the year 2002, Microsoft launched first version of its .NET framework, version 1.0 on 5th of January 2002. ASP.NET 1.0 was part of this framework. ASP.NET was built on Microsoft’s common language run time technology which means that it can be used with any .NET language in uniform manner.

**Features of ASP.NET:** Cross-platform & container support**,** Asynchronous via async/await**,** High performance**,** Unified MVC & Web API frameworks**,** Dependency Injection

**Efficiency of ASP.NET:**

**Coverage:** Parasoft Jtest**,** dotCover**,** openCover