

# Dot net principles and concepts

[Law](#), [Security](#)



NET framework offers developers with an object oriented environment; it guarantees safe execution of the applications by performing required runtime validations. . NET framework combines unprecedented developer productivity with reliability in performance and powerful deployment. . NET is a rapid application development and a comprehensive tool that is used effectively and widely for creating distributed applications, and as well as designing and developing web based and windows based applications.

Interoperability in . Net:

One of the prominent features of . Net framework is its support for language interoperability. The program should be developed using set of rules defined in Cross Language Specifications (CLS), such program can be used by other languages. But . Net does not support every program written in a language can be used by another language, it only supports for those program whose rules are defined in Cross Language Specifications. For instance we can develop a class in C# from class already developed in VB. Net. Moreover, . NET Common Language Runtime allows VB. Net program to handle an exception that is raised by a program written in C#.

NET and COM interoperability feature provides a bridge between the . NET and COM and vice versa. . NET framework enables developers to save additional migration cost by describing how . NET components can communicate with existing COM components. There is no need to modify developed COM components into . NET components. NET Framework and the . NET Common Language Runtime enables the powerful communication with the old technologies and allow the integration of legacy code with new . NET components.

## Security in . Net:

The enhanced security components in . NET framework makes our applications more secure and robust. Moreover, it can help the developers by minimizing the amount of code they need to write. Security implementation is a complicated task, and Microsoft has provided new security features to make the applications more secure and protected. Apart from the encapsulation and security functionality provided by the core of Windows operating system, . NET framework provides numerous additional and improved types such as public key cryptography, ASP. NET, Code Access Security Certificates and Certificate stores Public Key Cryptography Standard. . Net framework also provides object centric security; it allows the developers to control access to different types of objects. For example a developer can control the file system and the registry of systems that implement object centric security.

Basically there are two types of security in . NET: Role Based Security, Code Access Security. Common Language Runtime security allows the developer to use Code Access Security. Code Access Security enforces security policies that prevent unauthorized access to protected resources and process. Moreover Code Access Security allows the developer to do the following: Restrict what your code can do, Restrict which code can call your code, and Identify code. For instance: By using Code Access Security defined in the Common Language Runtime, if a developer creates security policy that user cannot save the file on the hard disk. If user try to save any information on the hard disk, that security policy enforces the user and user cannot save the information.

## Stability and Maintenance in . Net:

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Usullay IT Project Managers faces budget over runs and missed deadlines, most of the time risk management of the projects and completion of the projects under acceptable conditions is almost impossible. The main reason is due to lack of stable technologies and tools available in the market and used by different teams. The right answer to all of these issues is Microsoft .NET framework, because it is based on internet standards like XML and Web services and also due to the .NET framework ease of integration on the Windows operating system.

As .NET framework is stable and projects typically finish ahead of schedule and under budget constraint. That gives it an edge over others, most of the risk managers depends on rapid and robust .NET tool to manage the financial impact of missed deadlines. For instance if two teams are developing same project on two different tools, first on VB. Net and second on Java and both are developing project for Windows platform. First team will complete project earlier than the second team, one of the main reason is .NET applications are more stable with Windows platform.

One of the distinguishing features of .NET framework is that it is easy to deploy and maintain. Usually projects developed in .NET framework are easy to install on client machines and due to the supporting nature of .NET framework, projects are maintained by the programmers with no difficulty. For example code generation techniques using technologies such as XSLT are playing a significant role in software projects by providing the support to a rapidly maintainable code base.

#### Works Cited

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