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INTRODUCTION

Aim :

Introduction to Web Engineering.

Theory :

Web engineering is way of developing and organising knowledge about Web application development and applying that knowledge to develop Web applications, or to address new requirements or challenges. It is also a way of managing the complexity and diversity of Web applications.

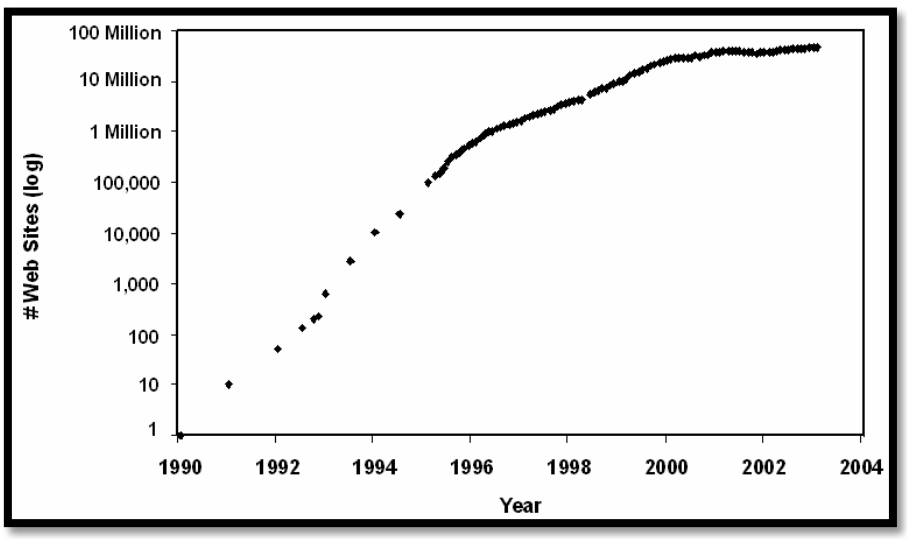
It is application of scientific, engineering, and management principles and disciplined and systematic approaches to the successful development, deployment and maintenance of high quality Web-based systems and applications.

It is a holistic and proactive approach to the development of large Web-based systems, and it aims to bring the current chaos in Web-based system development under control, minimise risks, and enhance the maintainability and quality of Web systems.

Since its origin and promotion as a new discipline in 1998, Web engineering is receiving growing interest among the stakeholders of Web-based systems, including developers, clients, government agencies, users, academics, and researchers. In addition, this new field has attracted professionals from other related disciplines such as multimedia, software engineering, distributed systems, computer science, and information retrieval.

Evolution of the Web

The Web has become closely ingrained with our life and work in just a few years. From its initial objective of facilitating easy creation and sharing of information among a few scientists using simple Web sites that consisted primarily of hyperlinked text documents, the Web has grown very rapidly in its scope and extent of use, supported by constant advances in Internet and Web technologies and standards. In 10 years, the number of Web sites dramatically has grown from 100 to over 45 million.



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Need for Web Engineering

It is felt according to perceptions of the developers and managers, their experiences in creating applications made feasible by the new technologies, and the complexity of Web applications. Web engineering, more generally, explicitly recognises the fact that good Web development requires multidisciplinary efforts and does not fit neatly into any of the existing disciplines.

Web Engineering is Multidisciplinary

Web engineering is multidisciplinary and encompasses contributions from diverse areas – systems analysis and design, software engineering, hypermedia/hypertext engineering, requirements engineering, human-computer interaction, user interface, information engineering, information indexing and retrieval, testing, modelling and simulation, project management, and graphic design and presentation.

Web Engineering is not a clone of software engineering, although both involve programming and software development. While Web engineering uses software engineering principles, it encompasses new approaches, methodologies, tools, techniques, and guidelines to meet the unique requirements of Web-based systems. As previously stated, development of Web-based systems is much more than traditional software development. There are subtle differences in the nature and lifecycle of Web-based and software systems, as well as the way in which they're developed and maintained. Web development is a mixture between print publishing and software development, between marketing and computing, between internal communications and external relations, and between art and technology.

Evolution of Web Engineering

Web Engineering is progressively emerging as a new discipline addressing the unique needs and challenges of Web-based systems development. Since 1998, when the First Workshop on Web Engineering was held in Brisbane, Australia, in conjunction with the World Wide Web Conference, there has been series of workshops and special tracks at major international conferences and a dedicated annual International Conference on Web Engineering.

New subjects and courses on Web engineering are now being taught at universities, both at undergraduate and postgraduate levels, and more research is being carried out on various aspects of Web engineering. Also, not surprisingly, there is growing interest among Web developers in using Web engineering approaches and methodologies.