# WebE Framework

Chapter -2 (Pressman)

"Web engineering proposes an *agile*, yet disciplined *framework* for building industry-quality WebApps."

# What does Agility means

- An agile team is a active team able to appropriately respond to changes.
  - Changes in the software being built,
  - changes to the team members,
  - changes because of new technology,
  - changes of all kinds that may have an impact on the product they build
  - or the project that creates the product.

# What is a WebE Framework?

- ~ is the foundation for a complete Web engineering process
- consist of a small number of framework activities
- applicable to all WebApp projects, regardless of their size or complexity.
- In addition, the framework encompasses a set of umbrella activities that are applicable across the entire WebE process.

# Generic WebE framework activities

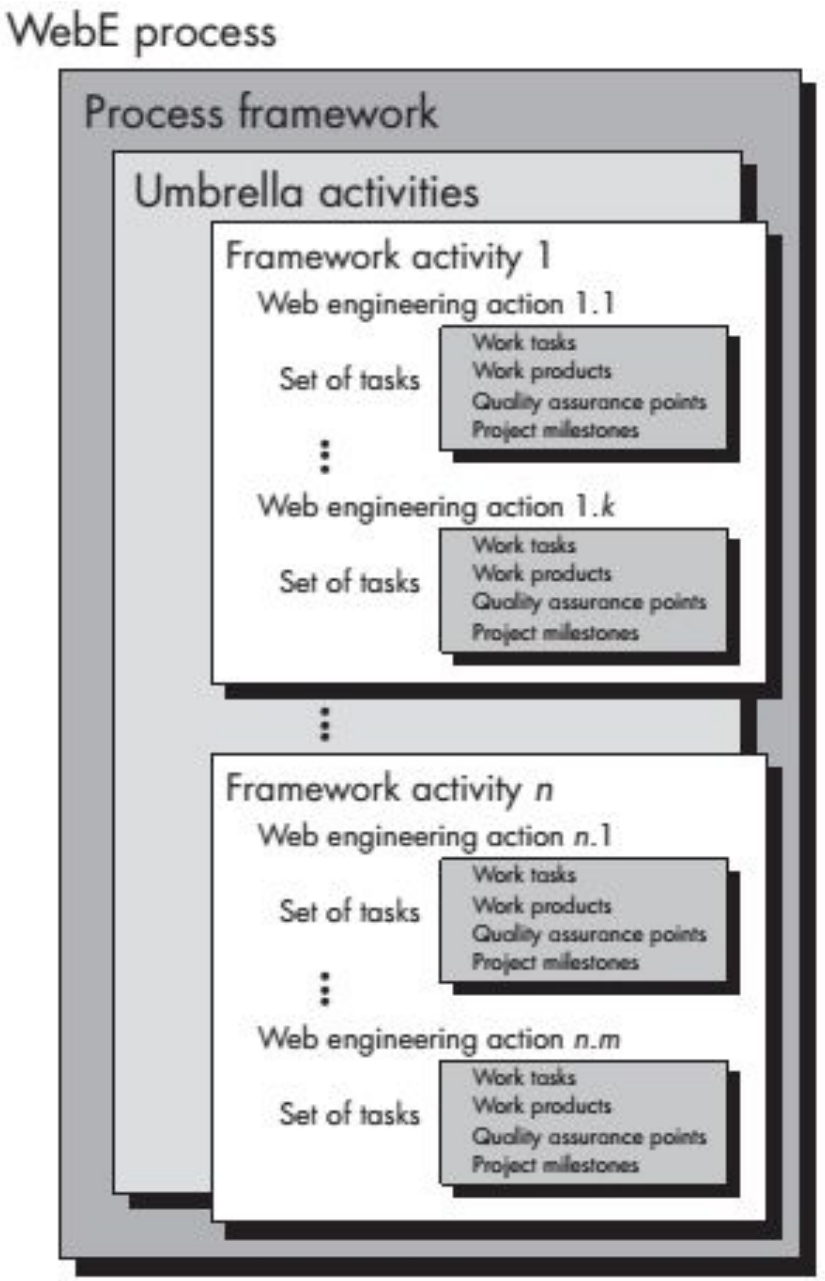
- Communication
  - Involves heavy interaction and collaboration with the stakeholders
  - encompasses requirements gathering and other related activities.
- Planning
  - Establishes an incremental plan for the WebE work
  - Describes
    - WebE actions that will occur
    - technical tasks to be conducted
    - risks that are likely
    - Resource required
    - the work products to be produced,
    - work schedule.

# Generic WebE framework activities

- Modeling
  - the creation of models that assist the developer and the customer to better understand WebApp requirements and the design that will achieve those requirements.
- Construction
  - the generation of HTML, XML, PHP, and similar code
  - testing mechanism that is required to uncover errors in the code.
- Deployment
  - Delivers a WebApp increment to the customer who evaluates it and provides feedback based on the evaluation.

**Umbrella activities**

- risk management,
- quality assurance,
- content management



# Agility principles adapted by WebE Framework user

- highest priority is to satisfy the customer through early and continuous delivery of valuable software.
- Welcome changing requirements, even late in development.
- Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
- Business people and developers must work together daily throughout the project.

# Agility principles adaped by WebE Framework user

- Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
- The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
- Working software is the primary measure of progress.
- The sponsors, developers, and users should be able to maintain a constant pace indefinitely.

# Agility principles adaped by WebE Framework user

- Continuous attention to technical excellence and good design enhances agility.
- Simplicity—the art of maximizing the amount of work not done—is essential.
- The best architectures, requirements, and designs emerge from self organizing teams.
- At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

# Why Is WebE Process Agility So Important?

- The Internet changed software development's top priority from **what** to **when**
- Reduced time-to-market has become the competitive edge for successful companies
- reducing the development cycle is now one of software engineering's most important missions

# WebE Methods within the Process Framework

- Communication methods
  - Define the approach used to facilitate communication between Web engineers and all other WebApp stakeholders
  - particularly important during requirements gathering and whenever a WebApp increment is to be evaluated.

- Requirements analysis methods

  for understanding
  - the content to be delivered by a WebApp,
  - the functions to be provided for the end user,
  - and the modes of interaction that each class of user will require.

# WebE Methods within the Process Framework

- Design methods
  - Encompass a series of design techniques that address
    - WebApp content,
    - application and information architecture,
    - interface design, and
    - navigation structure
- Construction methods
  - Apply a broad set of languages, tools, and related technology to the creation of WebApp content and functionality.
- Testing methods
  - wide array of testing techniques that address component-level and architectural issues, navigation testing, usability testing, security testing, and configuration testing.

# Web Engineering Best Practices

1. Take the time to understand business needs and product objectives, even if the details of the WebApp are vague.

2. Describe how users will interact with the WebApp using a scenario-based approach.

3. Develop a project plan, even if it’s very brief.

4. Spend some time modeling what it is that you’re going to build.

# Web Engineering Best Practices (Contd..)

5. Review the models for consistency and quality.

6. Use tools and technology that enable you to construct the system

7. with as many reusable components as possible.

8. Don’t reinvent when you can reuse.

9. Don’t rely on early users to debug the WebApp—design comprehensive tests and execute them before releasing the system.

# From book

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