Chapter-1

Web Application

A web application is a computer software that acquires, structures, presents information, and delivers it interactively over the web.

Web Apps really computer software?

Yes, they're collections of executable instructions and data that provide information and function-ality. They share many challanges with traditional software with special attributes.

Attributes of Web Apps

1. Network intensiveness
2. Concurrency
3. Unpredictable load
4. Performance
5. Availability
6. Data driven
7. Content sensitive
8. Continuous evolution
9. Immediacy
10. Security
11. Aesthetics.

Categories of web Apps

1. **Informational webapps**

   One that contains read-only content with simple navigation and links.

2. Download webapps

webapps with download capability of files like pdf, jpg etc.

3. Customizable webapps

Adjustable content and presentation based on user preferences.

4. Interaction webapps

Interactive, communicative — user and system

5. User input webapps

collects structured data from users often via forms.

6. Transaction-oriented webapps

Supports business transactions that involve calculation and confirmation.

7. Service-oriented webapps

Provides sophisticated, paid services to users.

8. Portals

Acts as gateways to a variety of information sources and services.

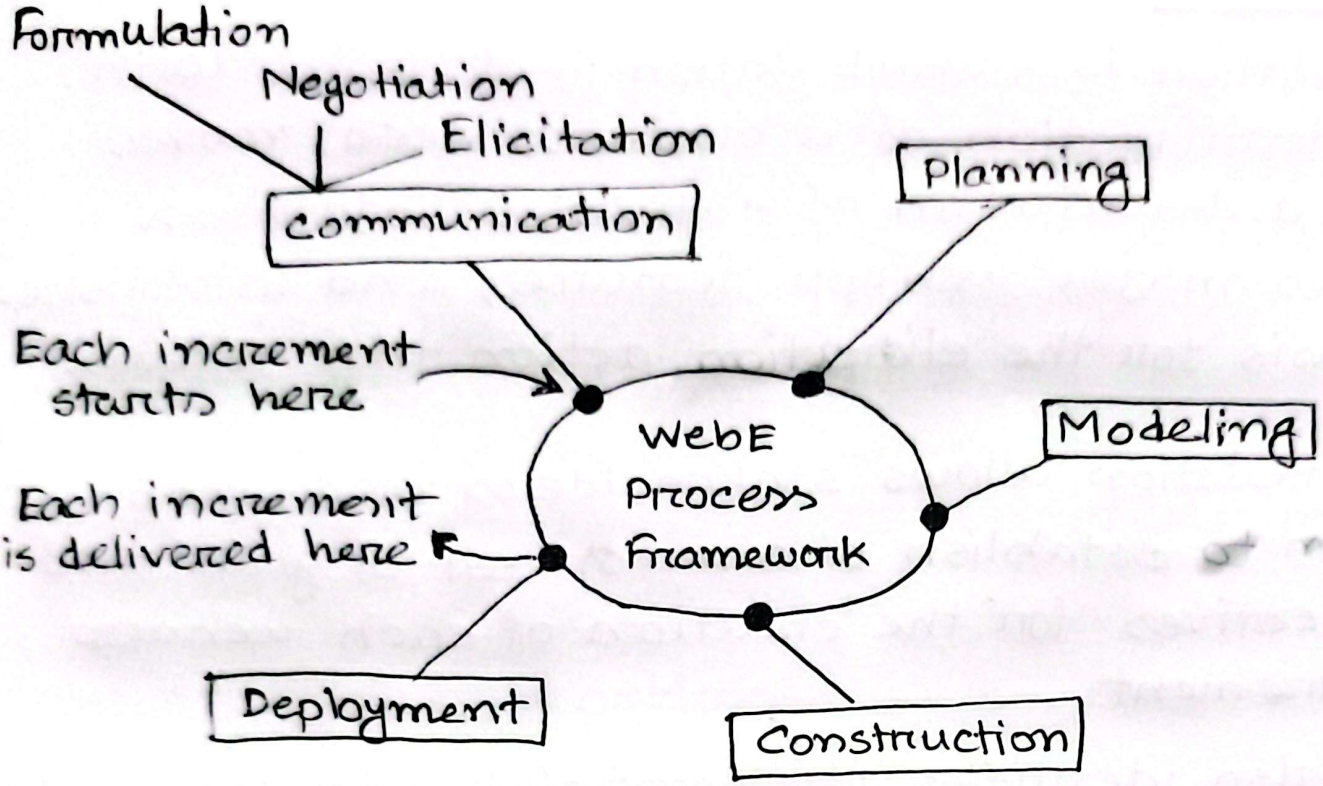
9. Database access webapp

Allows users query large databases.

10. Data warehousing webapps

Aggregate and analyze data from multiple source.

Chapter — 4



Communication

The webE process begins with the communication activity. It is the place where web engineers and stake holders engage in a series of webE actions that —

(1) Ask and answer a set of fundamental questions about the webapp and its business context.

(2) Elicit requirements that will serve as the basis for all activities to follow

(3) Negotiate needs against the realities of time, resources and technology.

Formulation

Formulation is a webE action that begins with the identification of a business need, moves into a description of ~~activities~~, objectives, defines major web app features, and establishes a basis for the elicitation action that follows.

- Formulation allows stakeholders and webE team to establish a common set of goals and objectives for the creation of each webapp increment.
- It also identifies the scope of the development effort and provides a means for determining a successful outcome.

Who should we communicate with?

Stakeholders —

(I) Business manager
(II) Product manager
(III) marketing people
(IV) internal and external customers
(V) end users and consultants
(VI) Product engineers
(VII) web engineers
(VIII) support and maintanence stuff

Techniques used for communication

1. **Traditional focus group**

A trained moderator meets with a small group of representative end users to discuss the webapp to be developed to better understand requirements for the system.

2. **Electronic focus group**

A moderated electronic text based discussion is conducted with a group of representative end users and stakeholders.

- large number of people
- same-time
- more info
- recorded.

3. **Iterative surveys**

Series of brief surveys addressed to representative and requesting answers to specific questions about webapp conducted via website or email.

4. **Exploratory survey**

web-based survey, users similar to the webapp to be developed.

5. **Scenario building**

Selected end users create usage scenarios.

Viewpoints

business manager — feature sets that will increase sales growth and improve revenue

marketing manager — features that will excite the potential market, leading to new customers.

Product manger — webapp built within budget.

End users — easy to use features

Web Engineers — functions enabling infrastructures.

Support Engineers — Maintanence.

Questions to ask

1. What is the main motivation for the webApp?
2. What are the objectives that the webapp must fulfill?
3. Who will use the app?

Elicitation

Elicitation means the ~~del~~ process to do detailed discovery of requirements.

~~In this~~

Before session

Prepare by reviewing existing systems, data and competitors.

During session

- Identify user categories
- Create usage scenerios
- Develop use cases

After session

Review and refine findings.

Use case

Step by step user-system interaction.

Usage scenerio

Narrative of user context.

- use cases creates user scenerios
- provides necessary details for planning and modeling.
- developers understands interactions between user and system by use case's help.

Negotiation

In this process, a balance of desirable ~~and~~ VD feasible requirements is achieved.

- Webapp is divided into small deliverable parts known as increments.
- Win-win situation is focused. by all stakeholders like business bodies gets features first and engineering team gets realistic schedule.

Chapter - 5

Planning

Planning is the webE action that organizes how to turn requirements into a working webapp.

Purpose

- Define scope, schedule, effort, risk, resources.
- Guide the project team to deliver increments efficiently.

Understanding ~~activi~~ scope

Identify —

- information objectives
- functional objectives
- constraints and performance expectations.

Use information from communication step to define scope.

Refinining framework activities

Break down high-level activities into —

- actions
- tasks
- work procedures/products.

Developing work products

- Increment plan
- Task list
- Effort and scedule estimates
- Risk management plan
- change management plan

Effort and cost estimation

Techniques —

- Expert judgement
- Analogy to past projects
- Historical data.

Building webE team

- Identify team roles — developers, designers, content writers, QA etc.
- Qualities of a good team —
  - motivated
  - skilled
  - collaborative
- Teams fails because —
  - poor communication
  - unclear roles.

Managing risk

Risk identification — find possible issues.
Risk evaluation — assess likelihood and impact.
Contingency plan — plan response if risk happens.

Types

- product risks — wrong requirements
- people risks — staff turnover, resignation
- process risks — poor selection of tools.

Scheduling

1. Macroscopic — high level plan showing increments.
2. Increment — detailed plan per increment.

Use

- Task dependancies
- critical paths
- Milestones.

Quality Management

- assess and define goals of quality
- walkthroughs and peer reviews.