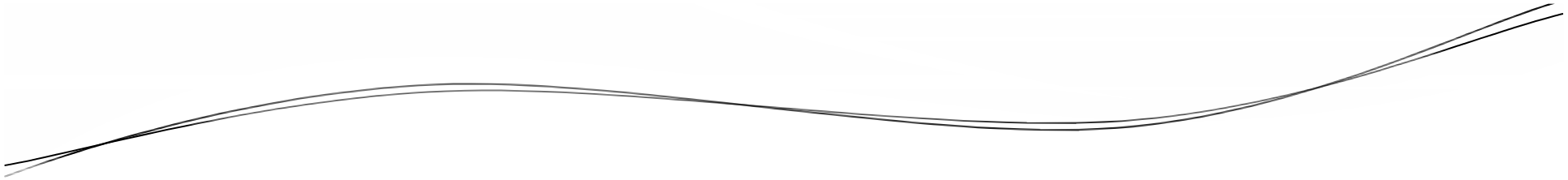

Java EE

By Rahul Barve

Objectives

- What is Java EE
- Java EE Components
- Need for Java EE
- Java EE Environment

Java EE

Java EE

- Java Enterprise Edition is a platform designed to create web based as well as enterprise level applications.
- Java EE emphasizes upon Component Driven Architecture.

Why Java EE

Why Java EE

- Would my application be able to support a set of thousand or more users?
- Would the service be available for 24x7x365?
- Would the response time suffer if user load increases?

Why Java EE

- Would the hardware resource requirements increase day by day with increasing user load?
- Would my application be able to get integrated with external applications smoothly?
- Will anybody be able to hack, steal or corrupt my confidential data?

Quality of Service Requirements

- Scalability
- Availability
- Performance
- Flexibility
- Security
- Re-usability
- Asynchronous Messaging

Components

Components

- A component is an application level reusable unit.
- Components are divided into 2 types:
  - Unmanaged
  - Managed

Components

- A component which is to be instantiated explicitly is called as an unmanaged component.

Components

- A component which gets instantiated implicitly is called as a managed component.
- Managed components are taken care by an environment known as Container.

Components

- In Java EE, components are divided into 2 types:
  - Web Components
  - Business Components

Web Components

Web Components

- A component that is responsible for accepting a web request and generating a web response is called as a Web Component, e.g, Servlet and JSP.

Business Components

Business Components

- A component that is responsible for handling a business logic of the application is called as a Business Component, e.g, EJB.

Container

Container

- A container is a runtime environment responsible for managing the life cycle of a Java EE components.

Container

- Containers are of 2 types:
  - Web Container
  - EJB Container

Web Container

Web Container

- A Web Container is a runtime environment responsible for managing the life cycle of web components: Servlet and JSP.

Web Container

- A web container is made available by a 3rd party product called as Web Server.
- The most commonly used web server is Apache Tomcat.

EJB Container

EJB Container

- An EJB Container is a runtime environment responsible for managing the life cycle of a business component: EJB.

EJB Container

- An EJB Container is made available by a 3rd party product called as an Application Server.
- An Application Server is an extension to Web Server.

EJB Container

- There are different types of Application Servers:
  - Oracle Weblogic
  - IBM WebSphere
  - RedHat Jboss
  - Oracle Glassfish

Let's Summarize

- What is Java EE
- Why Java EE
- Java EE Components
- Web Server and Application Server