

Web Development with Jakarta Server Pages and Servlets

Session: 11

Model-View-Controller Architecture



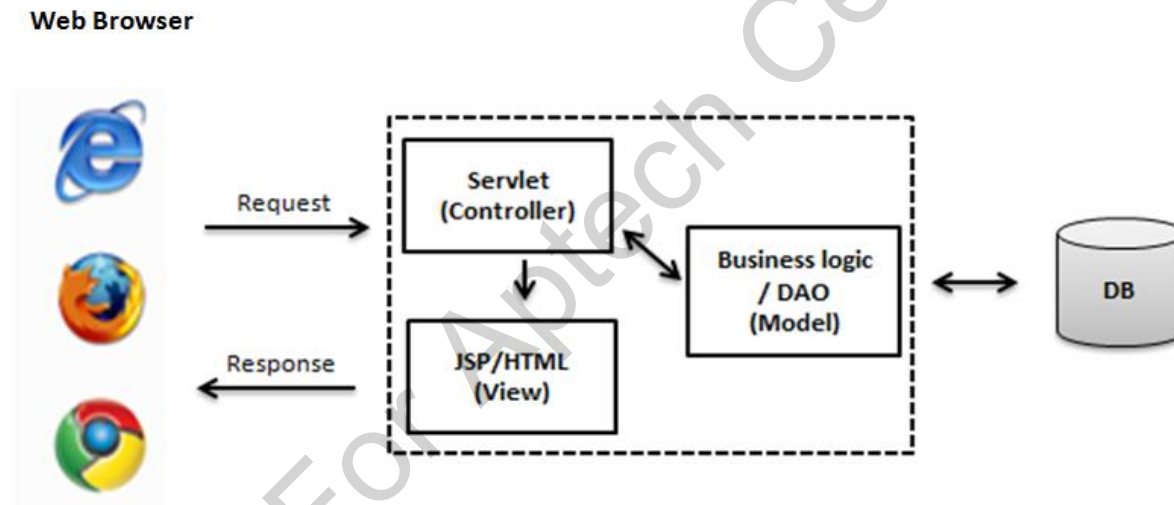
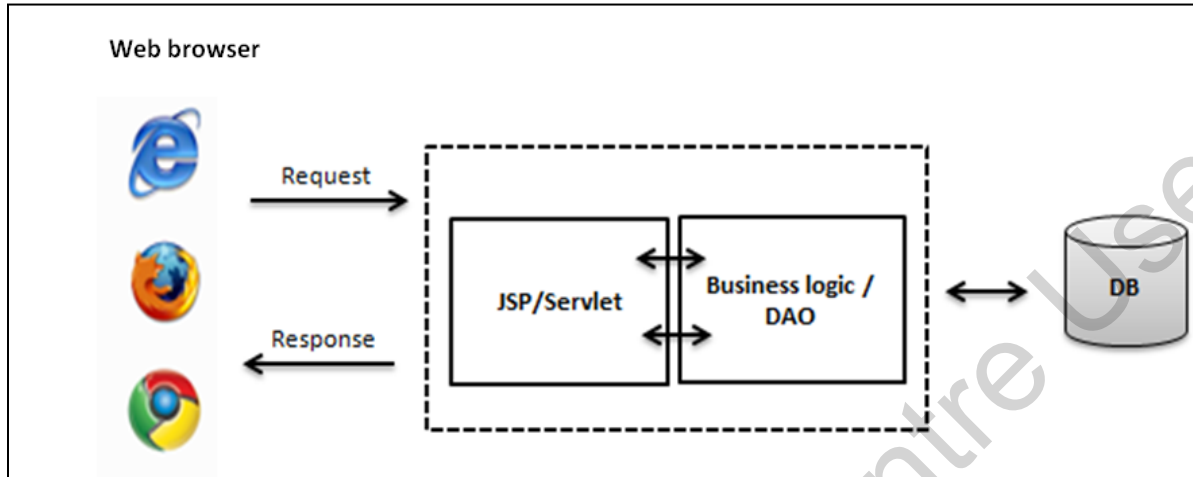
Objectives

- ❖ Describe JSP models
- ❖ Describe the advantages and disadvantages of Model1
- ❖ Describe the advantages and disadvantages of Model2
- ❖ Explain the Model-View-Controller architecture
- ❖ Explain the relationship between the components of MVC
- ❖ Explain Controller and its use
- ❖ Explain View and its use
- ❖ Explain Model and its use
- ❖ Develop a Web application based on MVC architecture
- ❖ Describe MVC and CDI
- ❖ Identify MVC events

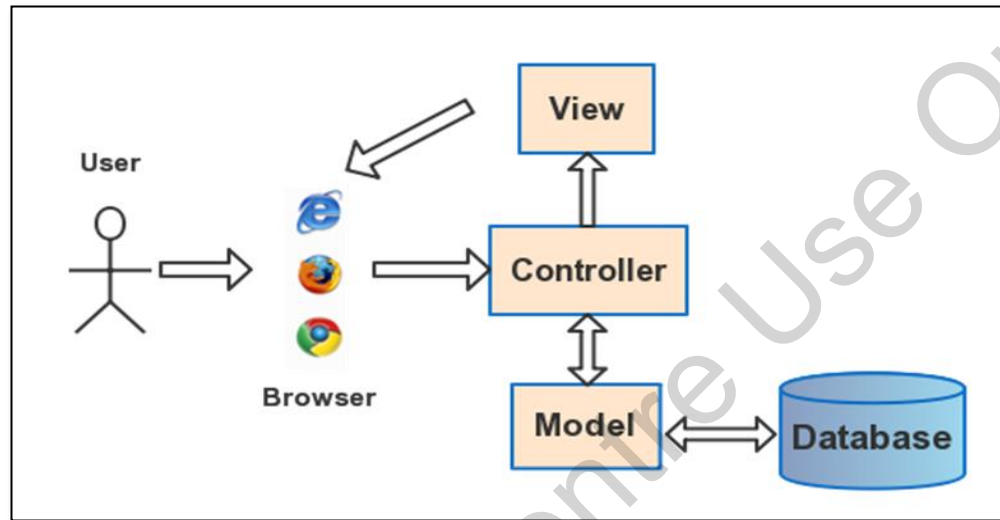
JSP Models

Address the problem of tightly-coupled presentation and business logic in servlets.

JSP Models

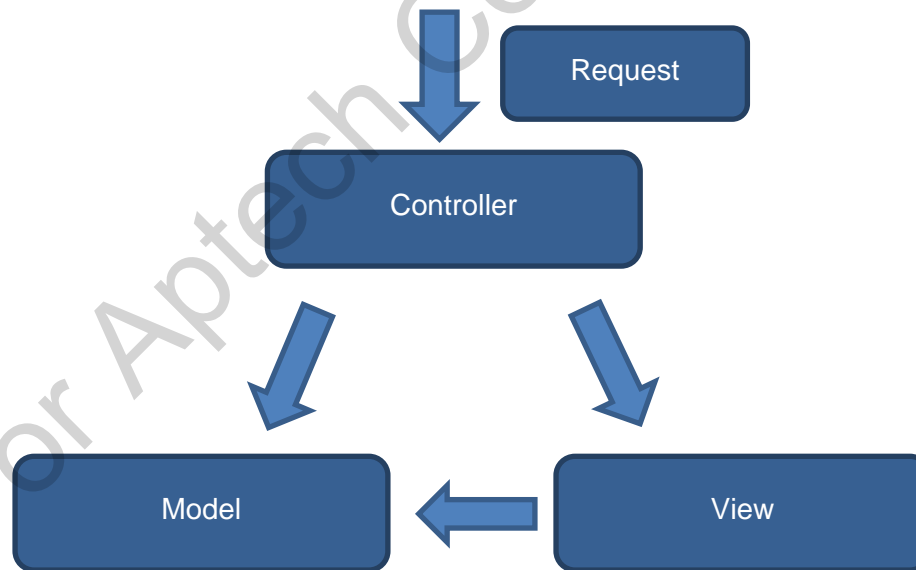


Model-View-Controller (MVC) (1-2)

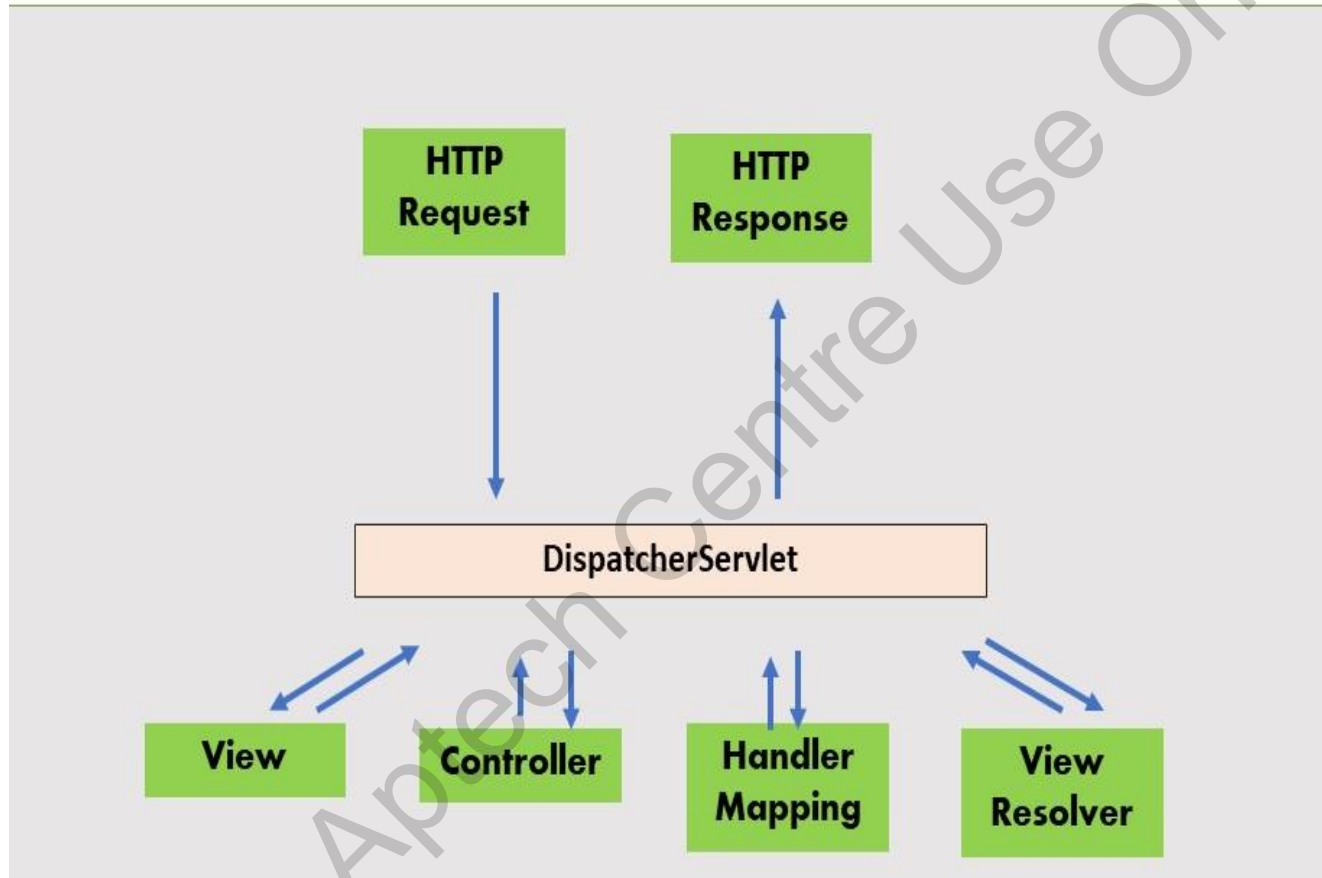


Components in
MVC Architecture

MVC Design
Pattern



Model-View-Controller (MVC) (2-2)



Spring MVC Flow Diagram

Summary

- ❖ The JSP specification presents two approaches for developing Web applications namely, JSP Model I and JSP Model II.
- ❖ JSP Model II is also known as MVC.
- ❖ MVC is a software design pattern, which can be used to design medium and large sized applications.
- ❖ MVC has three components as follows:
 - o Model
 - o View
 - o Controller
- ❖ In MVC Web application, servlet acts as controller, which receives the request from client.
- ❖ The view handles presentation of the content on the Web page and could be an HTML file or a JSP file.
- ❖ The Model component contains the business logics and functions that manipulate the business data.
- ❖ The Web container transfers control to event listeners in Jakarta EE to listen to events related to Servlets, JSP, and so on.
- ❖ ActionListener is an example of an event listener associated with a GUI element such as JButton.