Adv Java Day 5

Recap of Previous topics

1. How Web Works
2. Web Server
3. Static and Dynamic Page and How they are created
4. Servlet/JSP
5. Http Protocol (header, body, methods and response status codes)
6. Apache Tomcat Configuration
7. SSL on Tomcat
8. DataSource and how it is created on Tomcat
9. How to Use Eclipse IDE, Integrate Apache Tomcat with eclipse/STS
10. Create Dynamic Web Project
11. Html, CSS
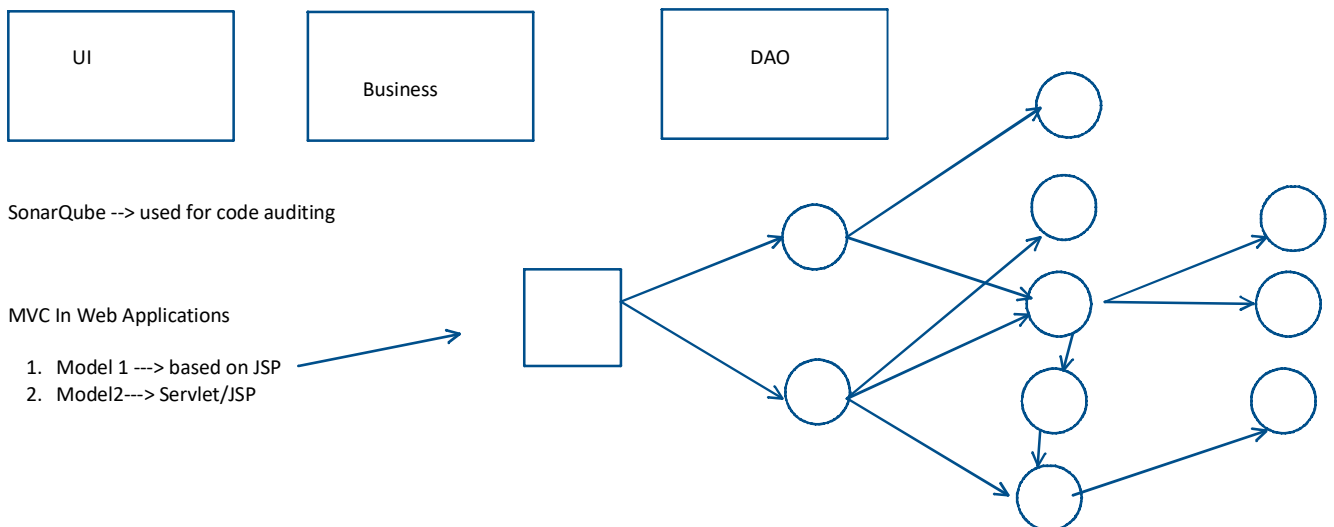12. JavaScript

Now what I expect from You:

Knowledge of
1. **Core Java Basics**
2. **Exception Handling**
3. **Collections (Set, List, Map at least)**
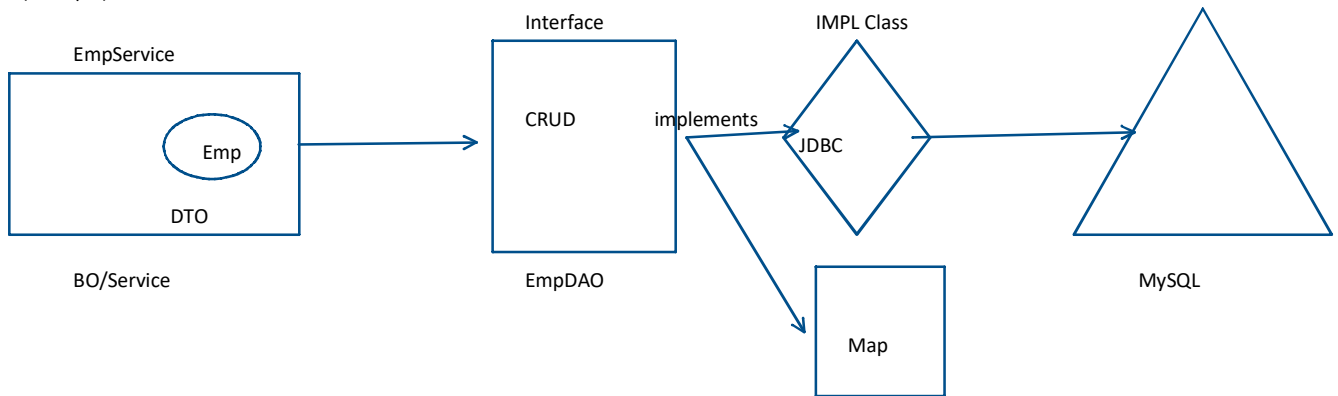4. **Concepts of Thread**

Layered Design:
1. UI or Interaction Layer --> User Interacts with this Layer
2. Business Layer --> Core Task is done here e.g. Access data from database, calculate TAX etc
3. Data layer--> The code or Strategy to access data from external Data Source

GOF Design pattern

SonarQube --> used for code auditing

MVC In Web Applications

1. Model 1 ---> based on JSP
2. Model2---> Servlet/JSP

DAO (Example)

EmpService

Interface

IMPL Class

Emp

DTO

CRUD

implements

JDBC

BO/Service

EmpDAO

Map

MySQL

Hands On:

1. Implement a Map based Dao with Service or Business Object for a Student with the given fields. Dao should have CRUD and List methods.
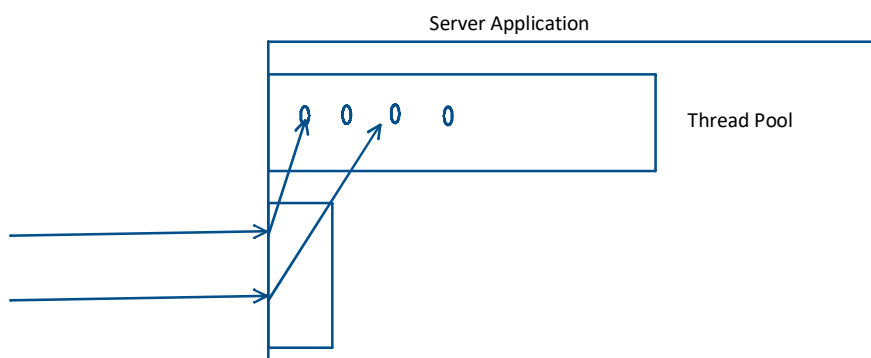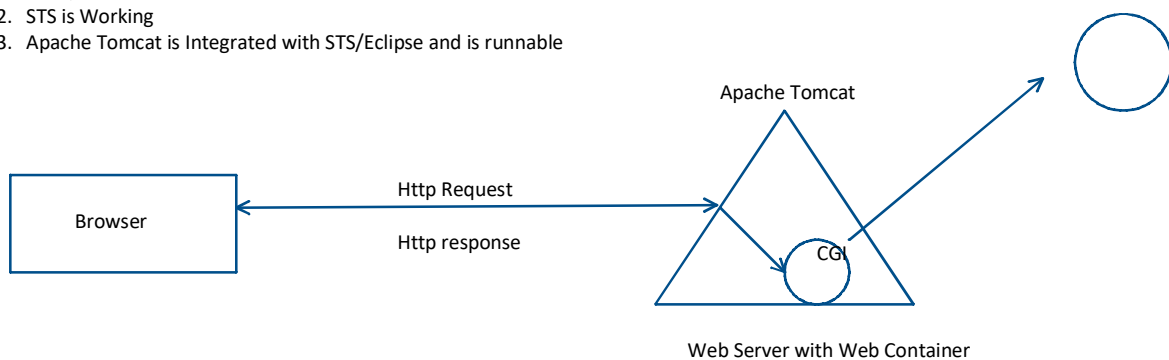
Student details:
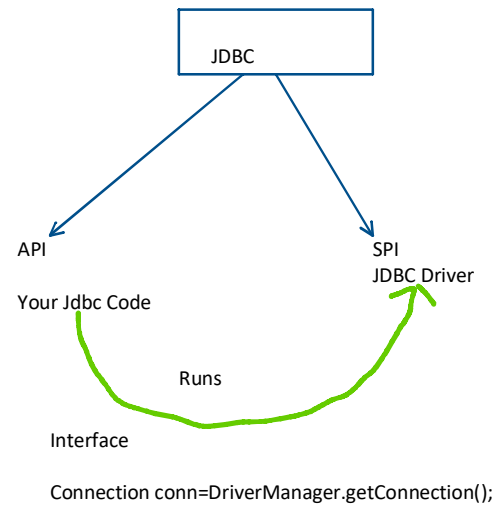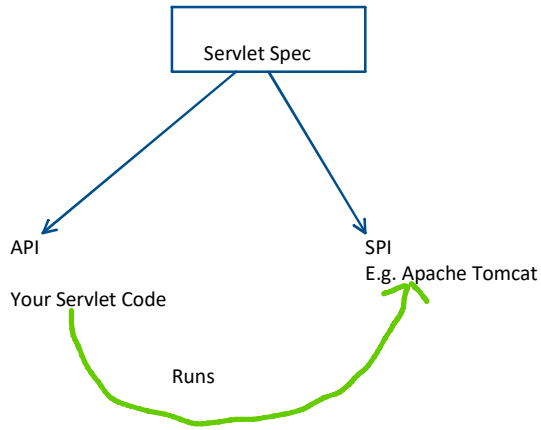rollNo:int (unique Id)
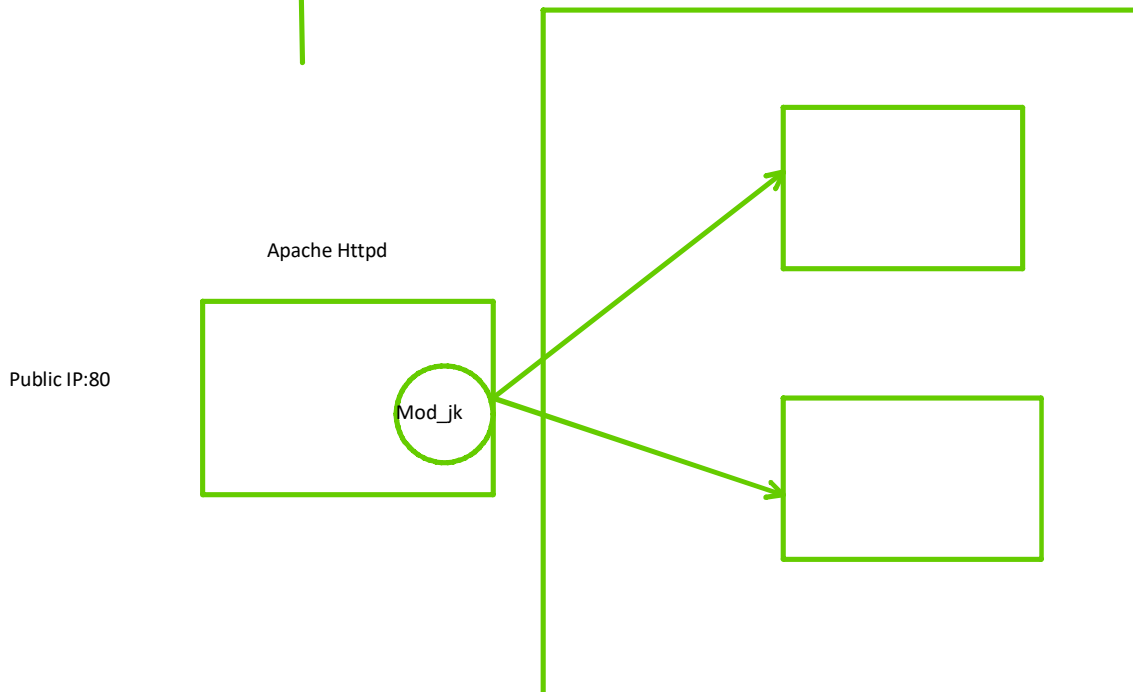studentName:String
Course:String

For Servlets, Please make sure
1. Java path is set
2. STS is Working
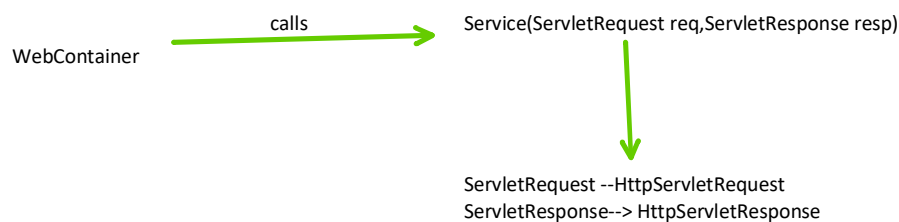3. Apache Tomcat is Integrated with STS/Eclipse and is runnable

Apache Tomcat

Browser

Http Request

Http response

CGI

Web Server with Web Container

Server Application

0 0 0 0

Thread Pool

Servlet Specs

Servlet Spec

JDBC

API

SPI
E.g. Apache Tomcat

API

SPI
JDBC Driver

Your Servlet Code

Your Jdbc Code

Runs

Runs

Interface

Web Module : 2.2,2.3,2.4,2.5,   3.0,3.1,3.2,4

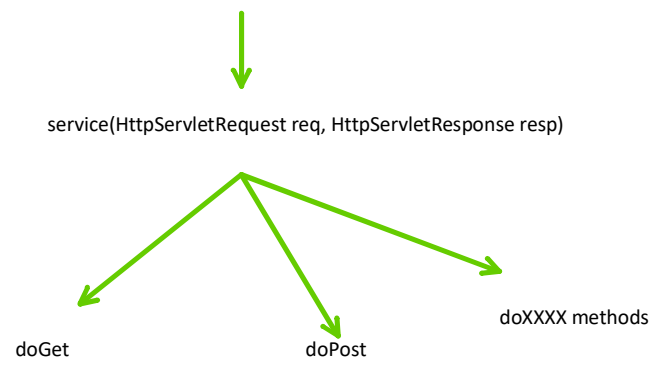Connection conn=DriverManager.getConnection();

Apache Httpd

Public IP:80

Mod_jk

HttpServlet

Http GET -----> In Http Servlet it call doGet

Http POST -----> In Http Servlet it call doPost

calls

Service(ServletRequest req,ServletResponse resp)

WebContainer

ServletRequest --HttpServletRequest
ServletResponse--> HttpServletResponse

service(HttpServletRequest req, HttpServletResponse resp)
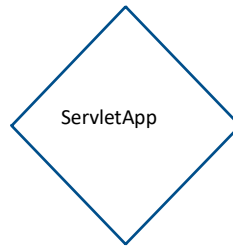
doGet

doPost

doXXXX methods

Form Data Processing

Request Form POST

Servlet

ServletApp

Response Page

Thank You
firstName+" "+lastName

Add 2 numbers and display the result on browser