
CONSULTANT TRACKER ARCHITECTURAL DESIGN

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1 Introduction

1.1 Purpose

The purpose of this document is to provide a high level overview of the Consultant Tracker system. The document will illustrate and explain the architectural design of the system, the use cases supported by the system and architectural styles and components that have been selected.

1.2 Overview

This document will begin by giving an overall description of the system. This will include the the architecture style and design chosen for the system and a deployment diagram used for diagramatic representation of the system as a whole.

2 Overall Description

2.1 Architectural Style

The system has been identified to be an interactive system. It will be deployed as a hybrid system which is composed of a model-view-controller architecture and a three-tier architecture. The architecture will be split into three distinct layers:

1. Presentation Layer

This will be responsible for displaying data in a particular format.

2. Logic Layer

This layer will work hand in hand with the controller. The controller will be responsible for data processing, as well as the extraction and insertion of data to and from the data layer. This layer will ensure that all business rules are satisfied.

3. Data Layer

This is responsible for storage of project data and consultant data.

2.2 Architecture Summary

A breakdown of the system and the various technologies used is shown below.

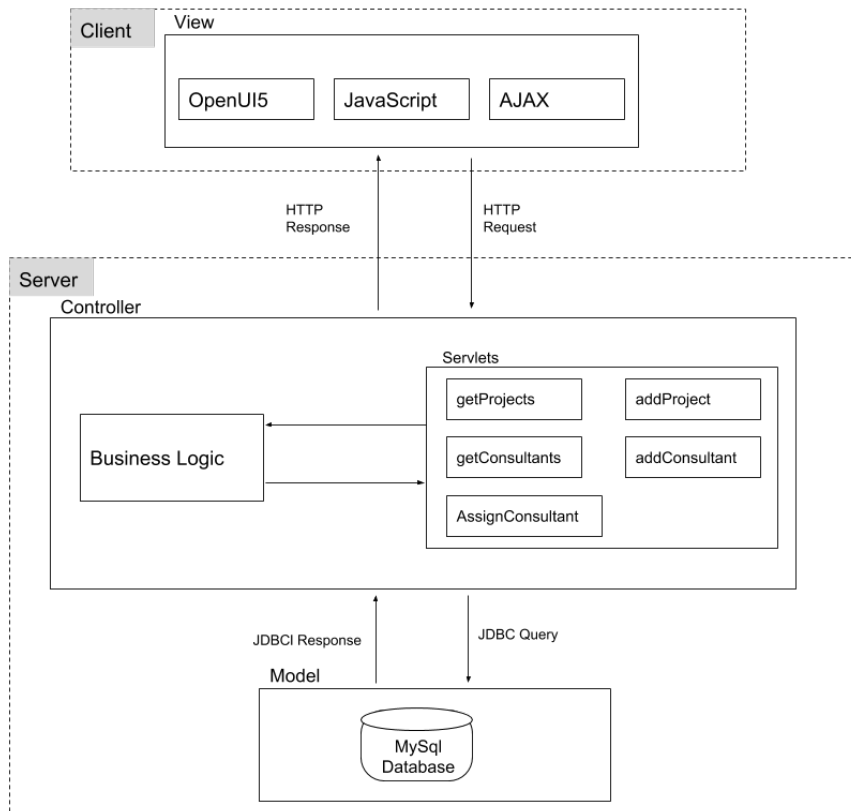


Figure 1: System breakdown

Technologies used include:

- Layer 1 - View
 - OpenUI5
 - JavaScript
 - AJAX
- Layer 2 - Controller
 - Java

- Java Persistence API
- Layer 3 - Model
 - MySQL
 - JDBC Sql Connector

3 User Roles

The system will consist of two users, namely an administrator and a consultant. Their roles are outlined below.

- Administrator
 - Login
 - CRUD Projects
 - CRUD consultants
 - Assign/remove consultants from a project
 - Communicate with consultants.
 - View projects currently running
- Consultant
 - Login
 - View assigned projects
 - Communicate with administrator

4 Quality Requirements

4.1 Security

The system will make use of two methods to achieve security. This will include:

- Role based management
Role based management manages authorization of users and enables the specifications of resources that the users will be permitted to access. It will allow for the grouping of users into two groups, namely the administrators and the consultants.
- User authentication
User authentication is a process of verifying the identity of a user who attempts to gain access to the system.

4.2 Usability

- The system must be easy to learn.
- The user interface must be easy to use and must be intuitive.
- The system should display options in a logical manner.
- Incorporate widgets and icons that the target users may be familiar with.
- The user manual should have a detailed description of the system.

4.3 Cohesion

Cohesion is the degree of relevance of the functions of the software modules with respect to the modules core functionality. All code written shall be written with the goal of attaining high cohesion. This will lead to robustness, reliability, reusability and understandability.

4.4 Coupling

All code will be written with the goal of attaining low coupling. Low dependencies between the code will lead to easier maintainability and understandability of the system.

5 Deployment Diagram

The system structure is depicted in the deployment diagram below.

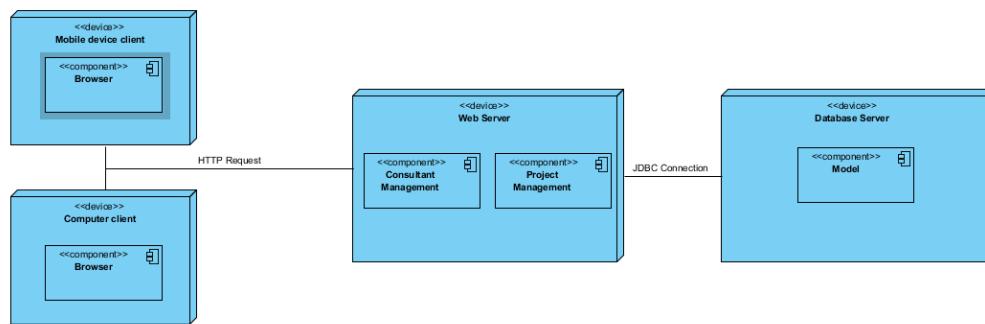


Figure 2: Deployment diagram