

# CS303: Software Engineering

## Project Deliverable 3: System Decomposition, Architecture, and Updated Plan

**Due Date:** 1630Hrs, Dec 05, 2020

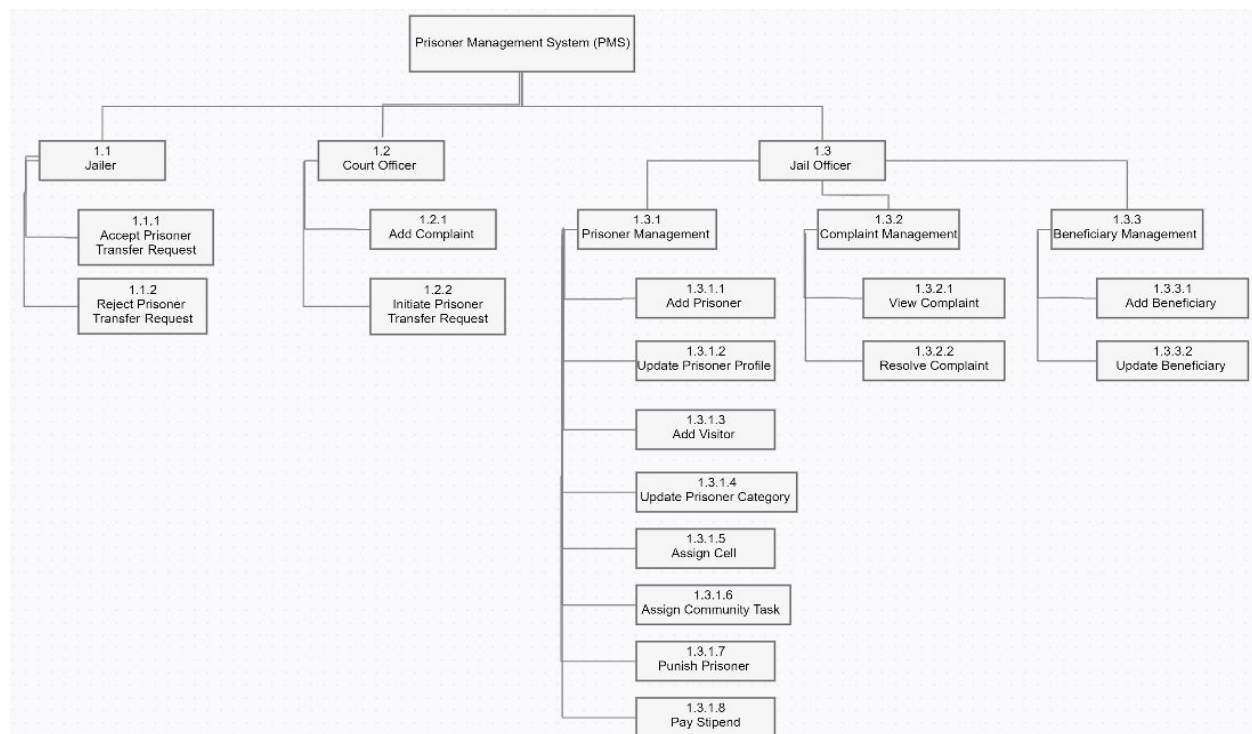
**Group Name:** CAVALRY

**Group Members:**

Shahrose Khaliq (13L-4322)  
Uzair Ahmed Bhatti (17L-4010)  
Muhammad Saqib Kamran (17L-4154)  
Muhammad Khuram Niaz (17L-4238)  
Ali Haseeb (17L-6326)

**Part 1:**

### Functional Decomposition



**Figure 1: Functional Decomposition**

*The figure represents the functional decomposition of Prisoner Management System*

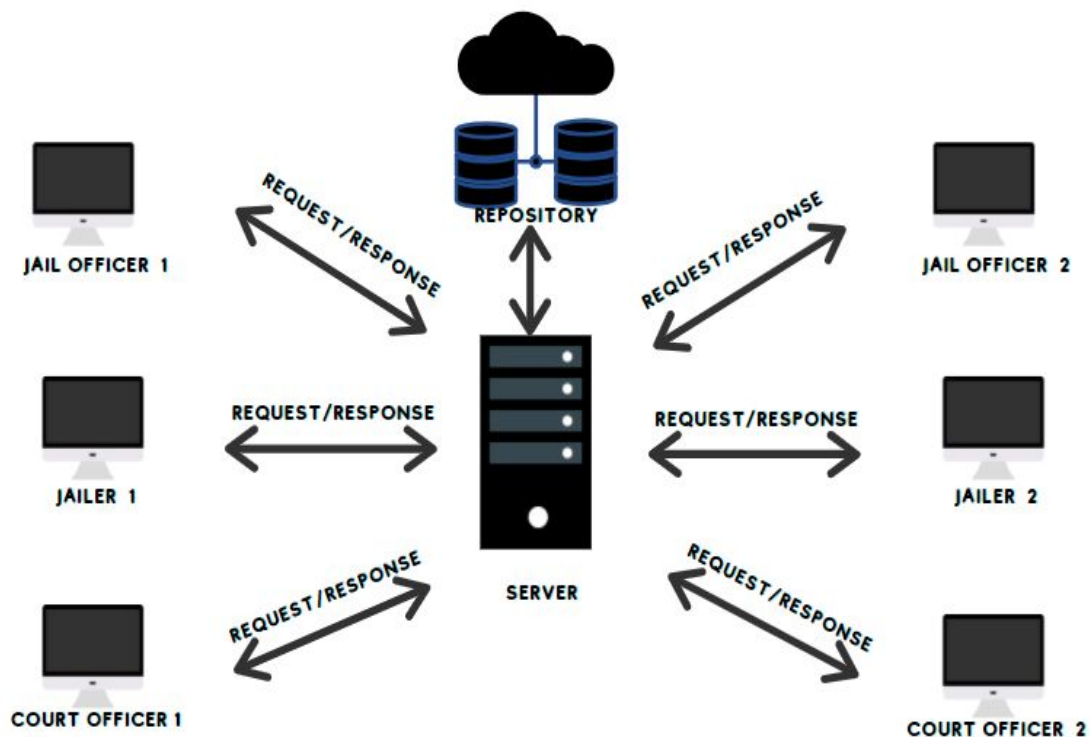
## Architecture Design

### Client - Server:

We are using Client - Server architecture. All the data of all the prisoners will be stored at a central server. This will make communication between the prisons easy and secure as compared to when stored on local servers of respective prisons. All actors of the system will be able to view data stored on the servers by logging in through their credentials. Actors will be able to update data, which will then be stored back on servers.

### Repository:

The reason for choosing the repository architecture is that it is flexible. If some modification in data access or business access logic is required, there is no need to change the repository logic. Moreover, It centralizes data logic or business logic and service logic. Repository architecture is helpful in defining the logic between the business and data access logic as it acts as mediator between these layers.



**Fig 2: Architecture Diagram**

*The figure represents the architecture diagram for Prisoner Management System*

## Part 2:

Activity / Work Item /Task	Assigned to	Performed by	Remarks
Prepare questions for initial meeting	All Group Members	All Group Members	
Worked on a proposal.	All Group Members	All Group Members	
Requirements Gathering Meeting#1	All Group Members	All Group Members	
Analyze requirements from Meeting#1	All Group Members	All Group Members	
Requirements Gathering Meeting#2	All Group Members	All Group Members	
Analyze requirements from Meeting#2	All Group Members	All Group Members	
Requirements Gathering Meeting#3 (final)	All Group Members	All Group Members	
Analyze requirements from Meeting#3(final)	All Group Members	All Group Members	Resolved the conflicting issues and finalised the overall requirements.
Prepared the functional and non-functional requirements document.	All Group Members	All Group Members	
Identification of Use Cases and preparation of Class Diagram	Khuram Niaz(17L-4238) Muhammad Saqib Kamran(17L-4154) Shahrose Khaliq (13L-4322)	Khuram Niaz(17L-4238) Muhammad Saqib Kamran(17L-4154) Shahrose Khaliq (13L-4322)	
Preparation of functional specification and methodology document.	Ali Haseeb(17L-6326) Uzair Ahmed Bhatti(17L-4010) Shahrose Khaliq (13L-4322)	Ali Haseeb(17L-6326) Uzair Ahmed Bhatti(17L-4010) Shahrose Khaliq(13L-4322)	
System Decomposition	Khuram Niaz(17L-4238) Muhammad Saqib Kamrna(17L-4154)	Khuram Niaz(17L-4238) Muhammad Saqib Kamran(17L-4154)	
Preparation of architecture design and updated plan.	Ali Haseeb(17L-6326) Uzair Ahmed Bhatti(17L-4010)	Ali Haseeb(17L-6326) Uzair Ahmed Bhatti(17L-4010)	

The table above shows the activities that have been performed so far with respect to the task assignment to group members.



Figure 4: Gantt Chart Prisoner Management System

*The figure represents the updated project status and completion time.*