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# Resilience

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## Manage prisons.

### **Synopsis Requirement Specifications**

Version: 1.0.

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Resilience.	Date : 10/09/2008
Team Name/ State Name	Resilience / Tamil Nadu

Date	Version	Description	Author
10/09/2008	1.0	First SRS	Resilience

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Resilience.	Date : 10/09/2008
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# Software Requirements Specification

## 1. Introduction

### 1.1 Purpose

Prison Management System –provides a user friendly way of managing various records over the internet. The central repository enables to track account- level data, all in-out information and session details.

### 1.2 Scope

#### Basic features:

- Create different system users and assign different roles with related permissions.
- Group the users together in a single account according to some criteria.
- Authenticate all user of the system.
- Track all the visitors their contact details.
- Track all the staff, non-staff and prisoner in out details.
- Graphical report on fund and other details generated in easily downloadable format.
- Track the Fund allotment and expenditure details.
- All activities performed by the system users will be maintained in the form of logs for auditing and maintaining the integrity of the system.
- Automated Diary Generation based on condition.
- JAVA based client for Super User.
- Maintain a centralized database to provide security to information which can be accessed only by the admin.
- Customizable Profile feature with predefined skins to choose from.

#### Additional features:

- Easily changeable Database Location in between servers.
- Secure Socket Layer (SSL) connectivity to ensure security.
- Optimized AJAX usage for better user interaction.

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- Private Messaging service to request the needs.
- Usage of JQuery for Pluggable look and feel.
- One time static creation of prisoner details.
- Password modification is made easy using JDBC connectivity.

### 1.3 Definitions, Acronyms and Abbreviations

- **Prisoner details:** Details of prisoner such as name, id, date of birth, address, father's name, digital photo and finger prints etc.
- **Staff details:** Details of staff associated with the prison.
- **HTML:** Hypertext Markup Language is a markup language used to design static web pages.
- **EJB:** Enterprise Java Beans.
- **JSP:** Java Server Pages.
- **JAVASCRIPT:** scripting language used for client side web development.
- **JQUERY:** lightweight JavaScript library that emphasizes interaction between JavaScript and HTML.
- **AJAX:** Asynchronous java script and XML.-used to change page content without reload
- **J2EE:** Java 2 Enterprise Edition is a programming platform— part of the Java Platform—for developing and running distributed multitier architecture Java applications, based largely on modular software components running on an application server.
- **DB2:** DB2 Database is the database management system that delivers a flexible and cost-effective database platform to build robust on demand business applications.
- **WAS:** Web sphere application server is an application server that runs business applications and supports the J2EE and web services standards.
- **RAD:** Rational application developer is a toolkit which is designed for the creation of more complex projects, providing fully dynamic web application utilizing EJB's . This consist of EJB tools , CMP ,data mapping tools & a universal test client that is designed to aid testing of EJB's.
- **HTTP:** Hypertext Transfer Protocol is a transaction oriented client/server protocol between web browser & a Web Server.
- **HTTPS:** Secure Hypertext Transfer Protocol is a HTTP over SSL (secure socket layer).

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- **TCP/IP:** Transmission Control Protocol/Internet Protocol, the suite of communication protocols used to connect hosts on the Internet. TCP/IP uses several protocols, the two main ones being TCP and IP.

#### 1.4 References

- Problem Definition (Provided by IBM)
- IEEE SRS Format
- Object Oriented systems development using Unified Modeling Language by Ali Bahrami, publication: McGraw-Hill, International edition 1999
- <http://java.sun.com/developer/technicalArticles/J2EE/AJAX/RealtimeValidation/>

#### 1.5 Technologies to be used

- RAD: Development Tool
- WAS: Web Server
- Rational: Design Tool
- J2EE: Application Architecture
- DB2: Database

#### 1.6 Overview

- **Overall Description** will describe major components of the system, interconnection and external interfaces.
- **Specific Requirements** will describe the functions of actors, their role in the system and constraints.

## 2. Overall Description

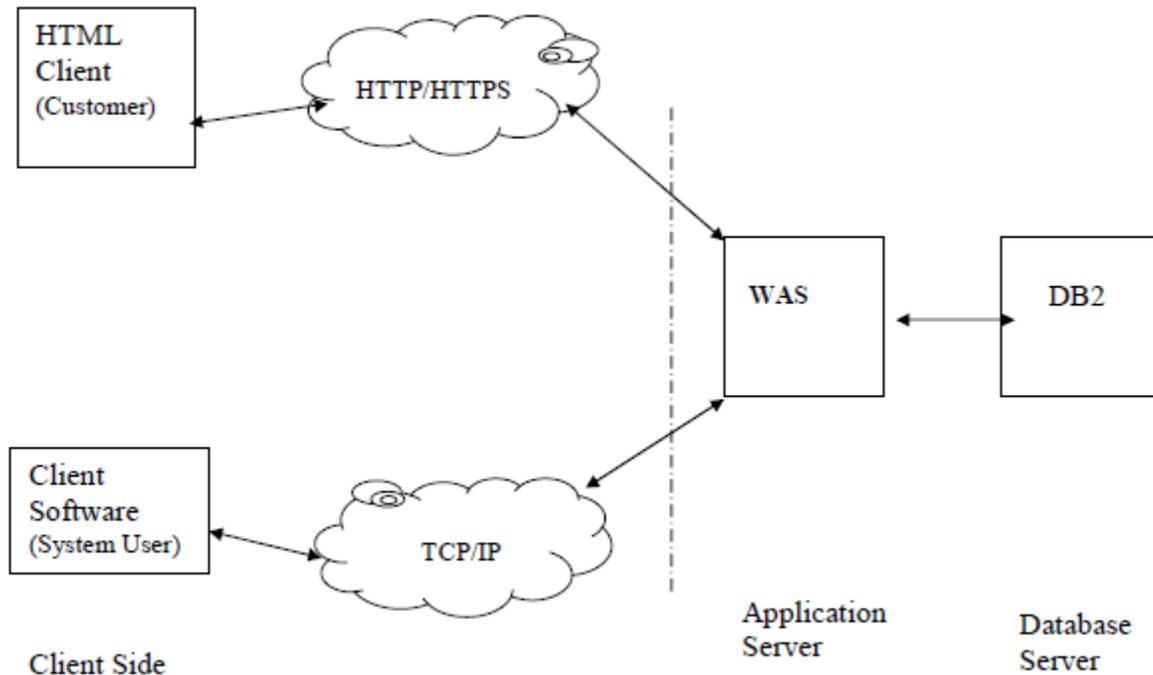
Describe the general factors that affect the product and its requirements.

### 2.1 Product Perspective:

- The web pages (XHTML/JSP) are present to provide the user interface on client side. Communication between client and server is provided through HTTP/HTTPS protocols.

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- The Client Software is to provide the user interface on system user client side and for this TCP/IP protocols are used.
- On the server side web server is for EJB and database server is for storing the information.



## 2.2 Software Interface:

**Client on Internet:** Web Browser, Operating System (any)

**Client on Intranet:** Client Software, Web Browser, Operating System (any)

**Web Server:** WAS, Operating System (any)

**Data Base Server:** DB2, Operating System (any)

**Development End:** RAD (J2EE, Java, Java Bean, Servlets, Jsp, Ejb), DB2, Linux, Web Server.

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## 2.3 Hardware Interface:

### Minimum Hardware requirements:

<i>Client Side</i>			
<i>Internet Explorer6.0 &amp;above, Mozilla Firefox, Chrome</i>	<i>Processor</i>	<i>RAM</i>	<i>DiskSpace</i>
	<i>Pentium III at 500 MHz</i>	<i>128MB</i>	<i>1GB</i>
<i>Server Side</i>			
<i>Web sphere application server v6.1</i>	<i>Pentium IV at 1.3 GHz</i>	<i>512MB</i>	<i>2GB</i>
<i>DB2 V9.1</i>	<i>Pentium IV at 1.3 GHz</i>	<i>512MB</i>	<i>1GB(Excluding data size)</i>

## 2.4 Communication Interface:

- Client on Internet will be using HTTP/HTTPS protocol.
- Client on Intranet will be using TCP/IP protocol.

## 2.5 Product Functionalities:

- Nominal Roll: The details of the prisoner and his/her demographic details should be captured. A digital photo comprising different views of the prisoner and the list of articles surrendered by prisoner during nominal roll are to be recorded.
- Case register: All the details of the cases against the prisoner should be captured. This must include the sentence details, remand/conviction details, etc.

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- Automated release diary generator: This report should be display the list of prisoners to be released on a day, the next day, the next week, the next month, or any given duration of time. The system should consider the reduction of sentence length due to various considerations.
- Parole register: This module should track all prisoners on parole and provide necessary reports on this data.
- Duty register: Who was where, why and when?
- Interview requests: All interview requests by the relatives of the prisoners need to be recorded and tracked.
- In-out register: An in-out register will track all prisoners and others who move in and out for various reasons. This should include provisions for recording the prisoners sent to courts for hearing.
- Funds: Fund allotted and routine accounting transactions should be captured.
- Admin facilities: Basic and advance admin facilities like add/update users, backup/recovery of data, generating various reports etc.

## 2.6 User Characteristics:

Every user should be comfortable of working with computer and net browsing. He must have basic knowledge of English too.

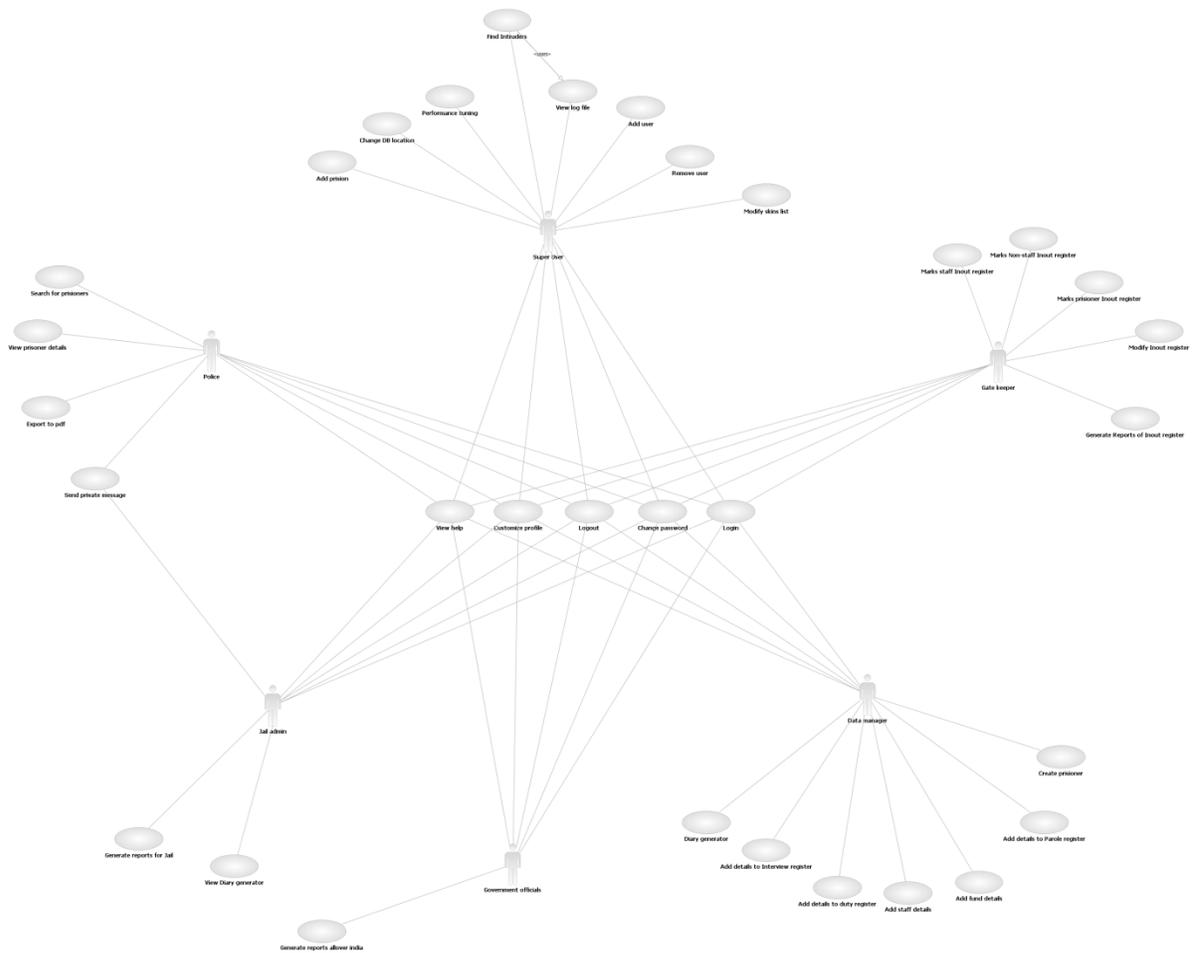
## 2.7 Constraints:

- GUI is only in English.
- Login and password is used for identification of customer and there is no facility for guest.
- Limited to HTTP/HTTPS.

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## 2.8 Use-Case Model Survey:

### USE CASE DIAGRAM

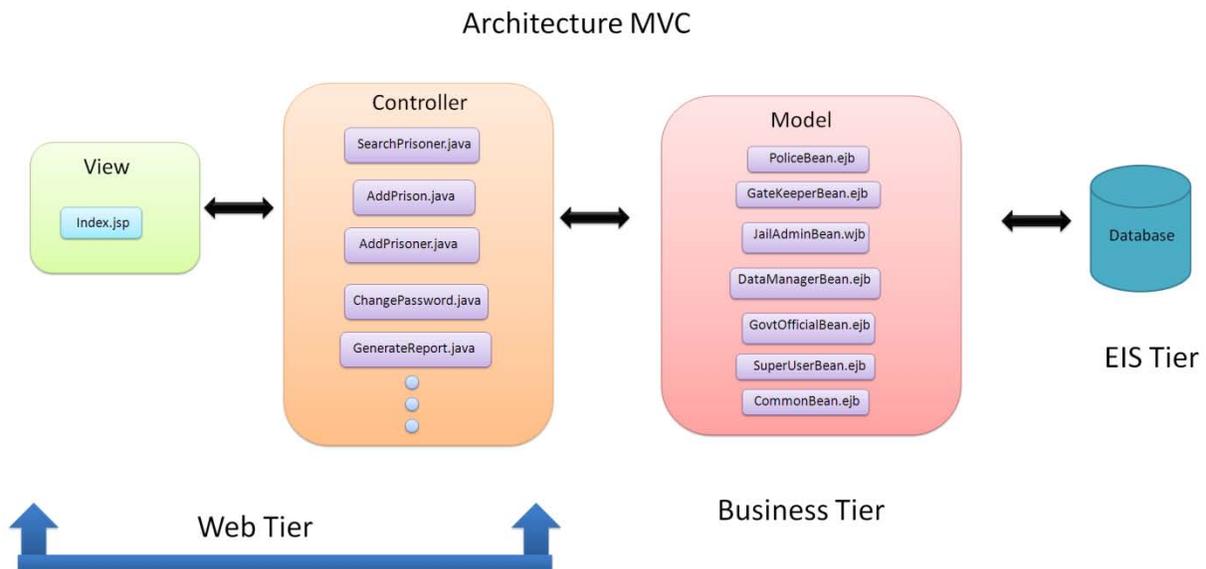


1. Police: Responsible for activities such as searching prisoner, viewing prisoner, exporting to Pdf and Send Private Message.

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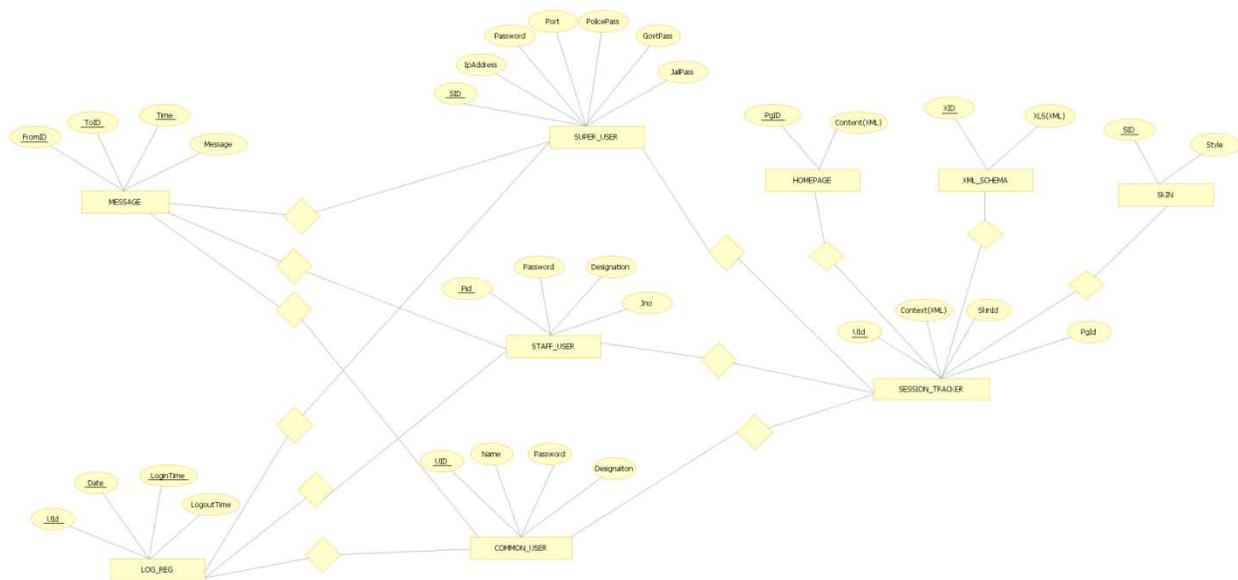
2. Jail Admin: Responsible for activities such as generating reports for jail, viewing diary generator.
3. Government Official: Responsible for activities of generating cumulative reports
4. Data Manager: Responsible for activities such as tracking prisoner detail, tracking parole detail, tracking fund detail, tracking staff detail, tracking duty detail, tracking interview detail and diary generation.
5. Gate Keeper: Responsible for activities such as tracking staff in/out detail, tracking non-staff in/out detail, tracking prisoner in/out detail, Modifying in/out detail and Generating report.
6. Super User: Responsible for activities such as adding prison, changing database location, performance tuning, viewing log, finding intruder, adding user, removing user, reading private message and making back up.

## 2.9 Architecture diagram



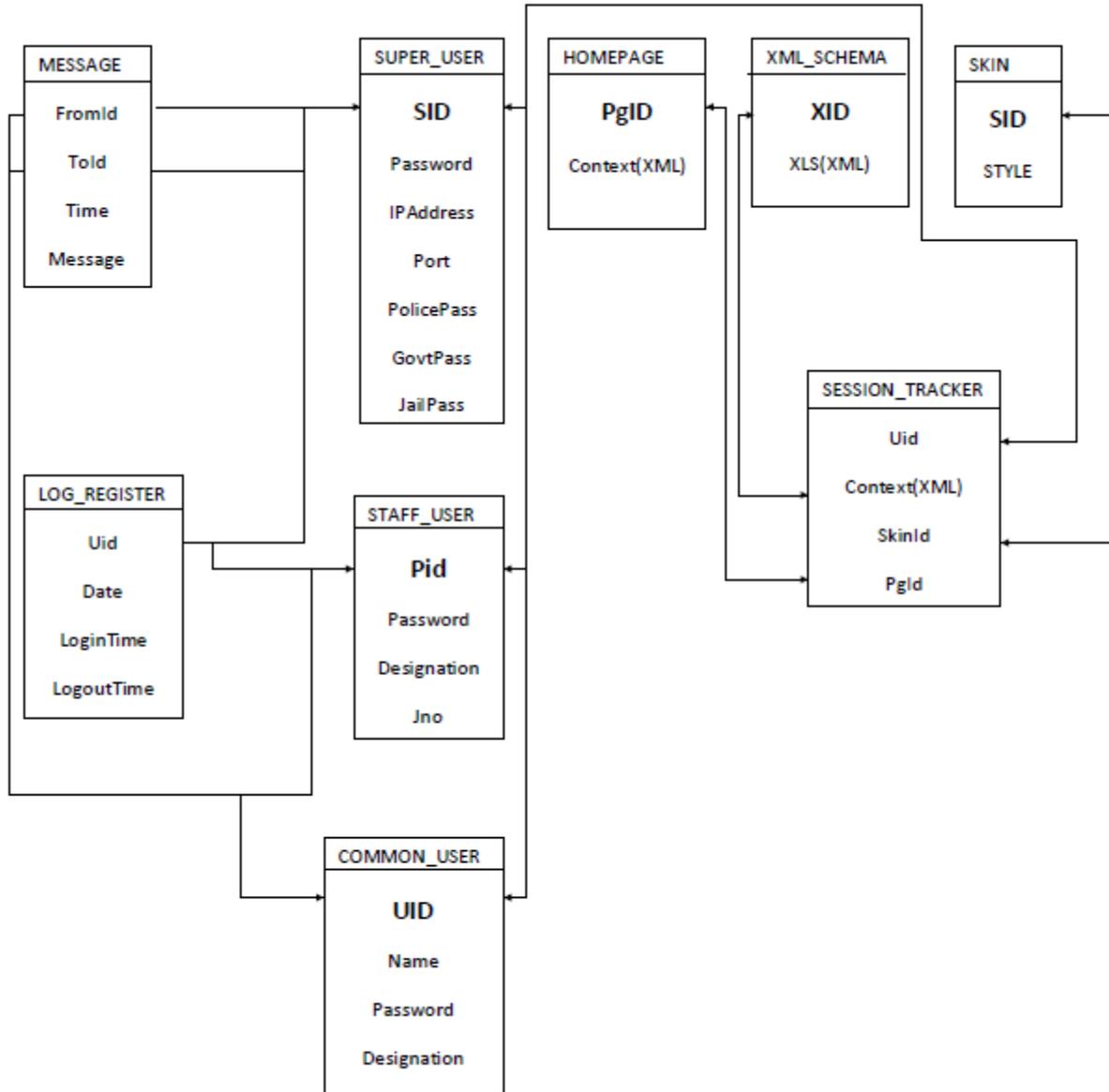


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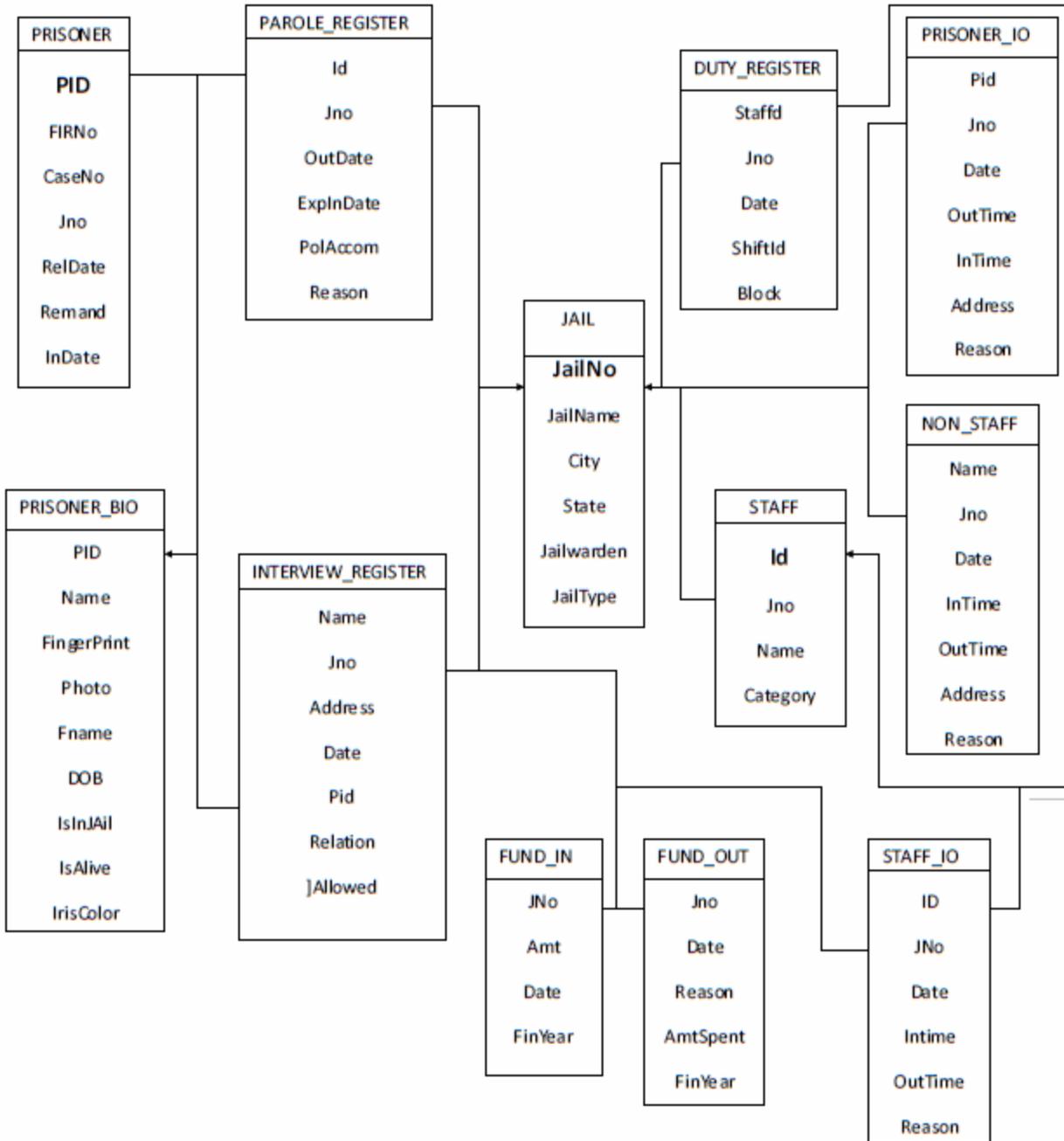


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### 2.11 Schema Diagrams

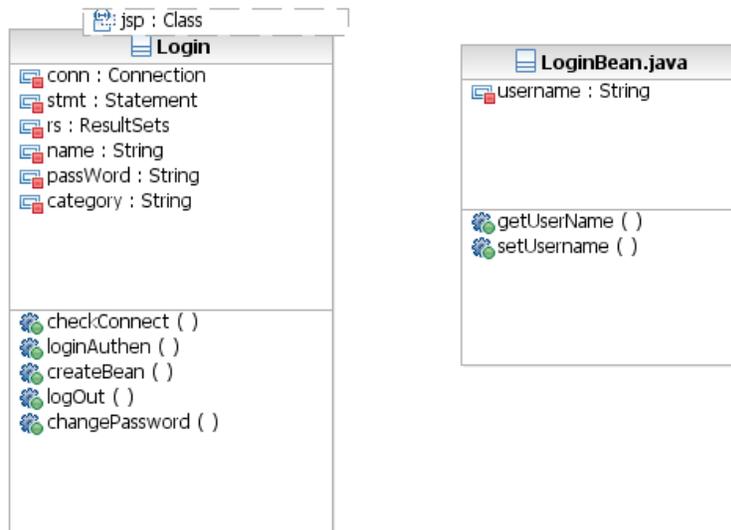


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## 2.12 Class Diagrams



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SERVLETS

IMAGE SERVLET

**getImage**

image : InputStream

---

doGet ( )

POLICE SERVLETS

**ChangePassword**

ctxt : Context  
home : PolicoHome  
remote : Police  
props : Properties

---

doPost ( )

**CustomizeProfile**

ctxt : Context  
home : PolicoHome  
remote : Police  
props : Properties

---

doPost ( )

**SearchPrisoners**

ctxt : Context  
home : PolicoHome  
remote : Police  
props : Properties

---

doPost ( )

**ViewPrisoner**

ctxt : Context  
home : PolicoHome  
remote : Police  
props : Properties

---

doPost ( )

**PdfExport**

ctxt : Context  
home : PolicoHome  
remote : Police  
props : Properties

---

doPost ( )

**SendMessageP**

ctxt : Context  
home : PolicoHome  
remote : Police  
props : Properties

---

doPost ( )

GATE\_KEEPER SERVLETS

**InsertIORRegister**

ctxt : Context  
home : GatekeeperHome  
remote : Gatekeeper  
props : Properties

---

doPost ( )

**UpdateIORRegister**

ctxt : Context  
home : GatekeeperHome  
remote : Gatekeeper  
props : Properties

---

doPost ( )

**GenerateReportG**

ctxt : Context  
home : GatekeeperHome  
remote : Gatekeeper  
props : Properties

---

doPost ( )

DATAMANAGER SERVLETS

**AddPrisoner**

ctxt : Context  
home : DataManagerHome  
remote : DataManager  
props : Properties

---

doPost ( )

**UpdatePrisoner**

ctxt : Context  
home : DataManagerHome  
remote : DataManager  
props : Properties

---

doPost ( )

**AddFundDetails**

ctxt : Context  
home : DataManagerHome  
remote : DataManager  
props : Properties

---

doPost ( )

**UpdateFundDetails**

ctxt : Context  
home : DataManagerHome  
remote : DataManager  
props : Properties

---

doPost ( )

**AddStaffDetails**

ctxt : Context  
home : DataManagerHome  
remote : DataManager  
props : Properties

---

doPost ( )

**UpdateStaffDetails**

ctxt : Context  
home : DataManagerHome  
remote : DataManager  
props : Properties

---

doPost ( )

**DeleteStaffDetails**

ctxt : Context  
home : DataManagerHome  
remote : DataManager  
props : Properties

---

doPost ( )

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JAIL\_ADMIN SERVLETS

**GenerateReportJ**

- ctxt : Context
- home : JailAdmin-Home
- remote : JailAdmin
- props : Properties

doPost ( )

**SendPrivMessageJ**

- ctxt : Context
- home : JailAdmin-Home
- remote : JailAdmin
- props : Properties

doPost ( )

GOVT\_OFFICIAL SERVLETS

**GenerateReportGO**

- ctxt : Context
- home : GovtOfficial-Home
- remote : GovtOfficial
- props : Properties

doPost ( )

SUPERUSER SERVLETS

**ChangeDbLocation**

- ctxt : Context
- home : SuperUserHome
- remote : SuperUser
- props : Properties

doPost ( )

**AddPrison**

- ctxt : Context
- home : SuperUserHome
- remote : SuperUser
- props : Properties

doPost ( )

**AddUser**

- ctxt : Context
- home : SuperUserHome
- remote : SuperUser
- props : Properties

doPost ( )

**RemoveUser**

- ctxt : Context
- home : SuperUserHome
- remote : SuperUser
- props : Properties

doPost ( )

**AddSkin**

- ctxt : Context
- home : SuperUserHome
- remote : SuperUser
- props : Properties

doPost ( )

**RemoveSkin**

- ctxt : Context
- home : SuperUserHome
- remote : SuperUser
- props : Properties

doPost ( )

**AddIndex**

- ctxt : Context
- home : SuperUserHome
- remote : SuperUser
- props : Properties

doPost ( )

**ViewLog**

- ctxt : Context
- home : SuperUserHome
- remote : SuperUser
- props : Properties

doPost ( )

**BackupData**

- ctxt : Context
- home : SuperUserHome
- remote : SuperUser
- props : Properties

doPost ( )

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EJB CLASSES

COMMON

```

<interface>
CommonHome
userId : String
password : String

create ()
findByPrimaryKey ()

```

```

<interface>
Common

changePassword ()
changeSkin ()

```

```

CommonBean

setEntityContext ()
unsetEntityContext ()
ejbActivate ()
ejbPassive ()
ejbLoad ()
ejbStore ()
ejbRemove ()
ejbCreate ()
ejbPostCreate ()
changePassword ()
changeSkin ()

```

POLICE

```

<interface>
PoliceHome
userId : String
password : String
prName : String
prCrime : String
prCity : String
prState : String

create ()
findByPrimaryKey ()

```

```

<interface>
Police

findPrisoner ()
changePassword ()
customizeProfile ()
viewPrisoner ()
exportPdf ()

```

```

PoliceBean

setEntityContext ()
unsetEntityContext ()
ejbActivate ()
ejbPassive ()
ejbLoad ()
ejbStore ()
ejbRemove ()
ejbCreate ()
ejbPostCreate ()
findPrisoner ()
changePassword ()
customizeProfile ()
viewPrisoner ()
exportPdf ()

```

GATE\_KEEPER

```

<interface>
GateKeeperHome
userId : String
password : String

create ()
findByPrimaryKey ()

```

```

<interface>
GateKeeper

insertRecord ()
updateRecord ()
generateReport ()

```

```

GateKeeperBean

setEntityContext ()
unsetEntityContext ()
ejbActivate ()
ejbPassive ()
ejbLoad ()
ejbStore ()
ejbRemove ()
ejbCreate ()
ejbPostCreate ()
insertRecord ()
updateRecord ()
generateReport ()

```

JAIL\_ADMIN

```

<interface>
JailAdminHome
userId : String
password : String

create ()
findByPrimaryKey ()

```

```

<interface>
JailAdmin

sendPrivMessage ()
generateReport ()
viewDiaryRegister ()

```

```

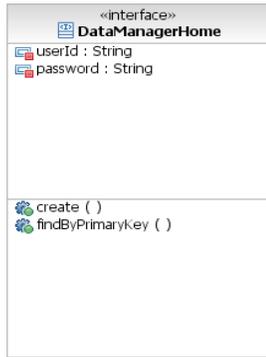
JailAdminBean

setEntityContext ()
unsetEntityContext ()
ejbActivate ()
ejbPassive ()
ejbLoad ()
ejbStore ()
ejbRemove ()
ejbCreate ()
ejbPostCreate ()
sendPrivMessage ()
generateReport ()
viewDiaryRegister ()

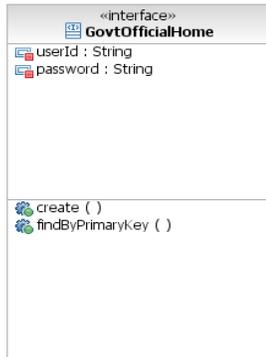
```

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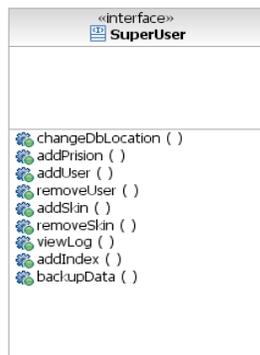
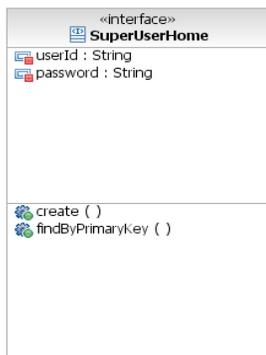
DATA\_MANAGER



GOVT\_OFFICIAL



SUPER\_USER



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### **2.13 Assumptions and Dependencies**

- The end user should have a basic knowledge of English and computer usage.
- Administrator is created in the system already.
- Roles and tasks are predefined.

## **3. Specific Requirements:**

### **3.1 Use-Case Reports:**

**Actors:** The system caters to following types of user.

1. Police user
2. Jail Administrator
3. Government Official
4. Data Manager
5. Gate Keeper
6. Super User

The initial system requirement only specified users 1-4. The users 5, 6 were included to provide jail specific functionalities & database administrative functionalities.

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### **Common Functionalities:**

The following function may be performed any one of the six types of users.

- **Login:**

In order to access other specific functionalities a user must login to the system. All users can login to the system using their user name and password.

**Name of use case:** login

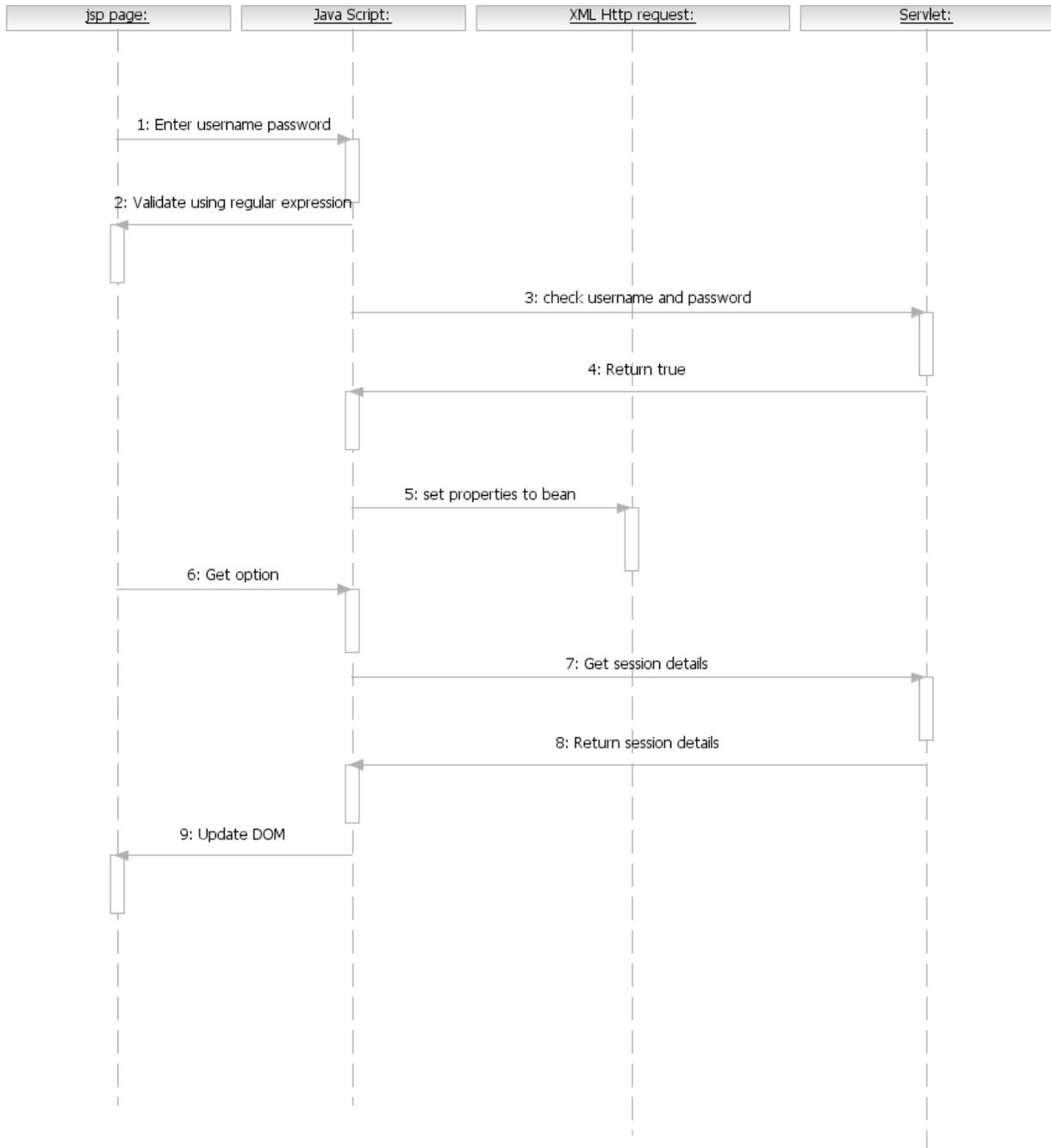
**Description:** client enters user name and password and the system authenticates the user.

**Preconditions:** The user account is existing in the database and has not yet logged in.

**Normal flow of events:**

- ✓ The client enters user name and password.
- ✓ Javascript validates the provided information using regular expression.
- ✓ The Jsp page passes the request to Servlet.
- ✓ The Servlet checks against database and returns true.
- ✓ A bean instance is created and property is set by javascript.
- ✓ User is asked for the option of continuing with previous session by java script.
- ✓ Based on user input the session detail is got from Servlet and DOM is updated.

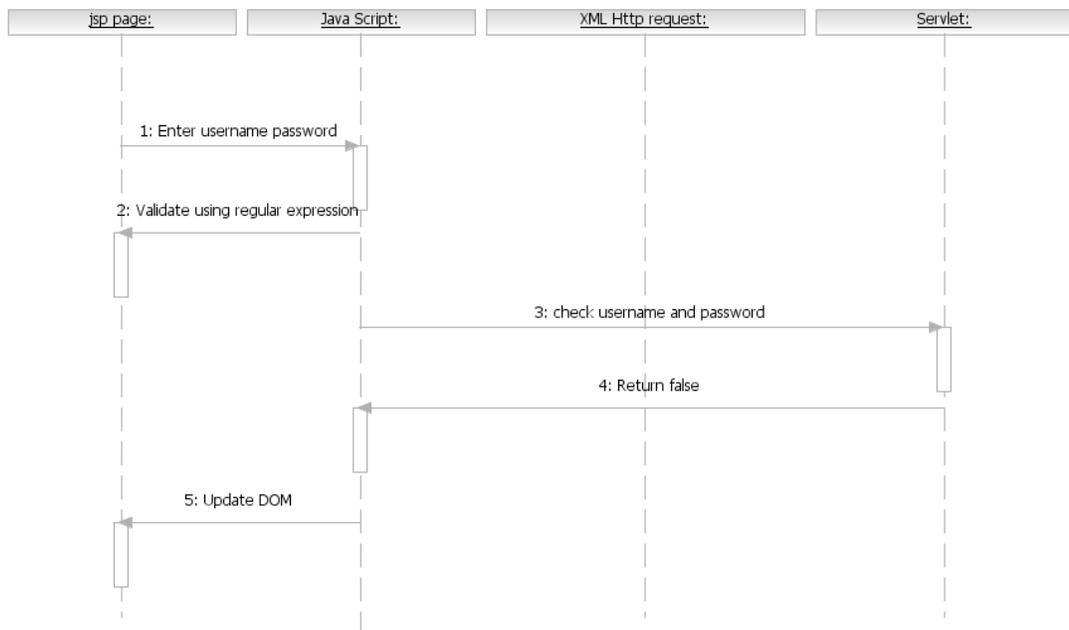
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**Alternative flow of events:**

- ✓ The client enters user name and password.
- ✓ Javascript validates the provided information using regular expression.
- ✓ The Jsp page passes the request to Servlet.
- ✓ The Servlet checks against database and returns true.
- ✓ The Jsp page is updated with corresponding error message.



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- **Logout:**

After completion all his/her activities an user may logout of the system. After logout a user wouldn't be able access features of the system.

- **Change password:**

A user of the system would be provided a default password at the beginning. To maintain privacy he/she can change his/her password.

**Name of use case:** Change Password

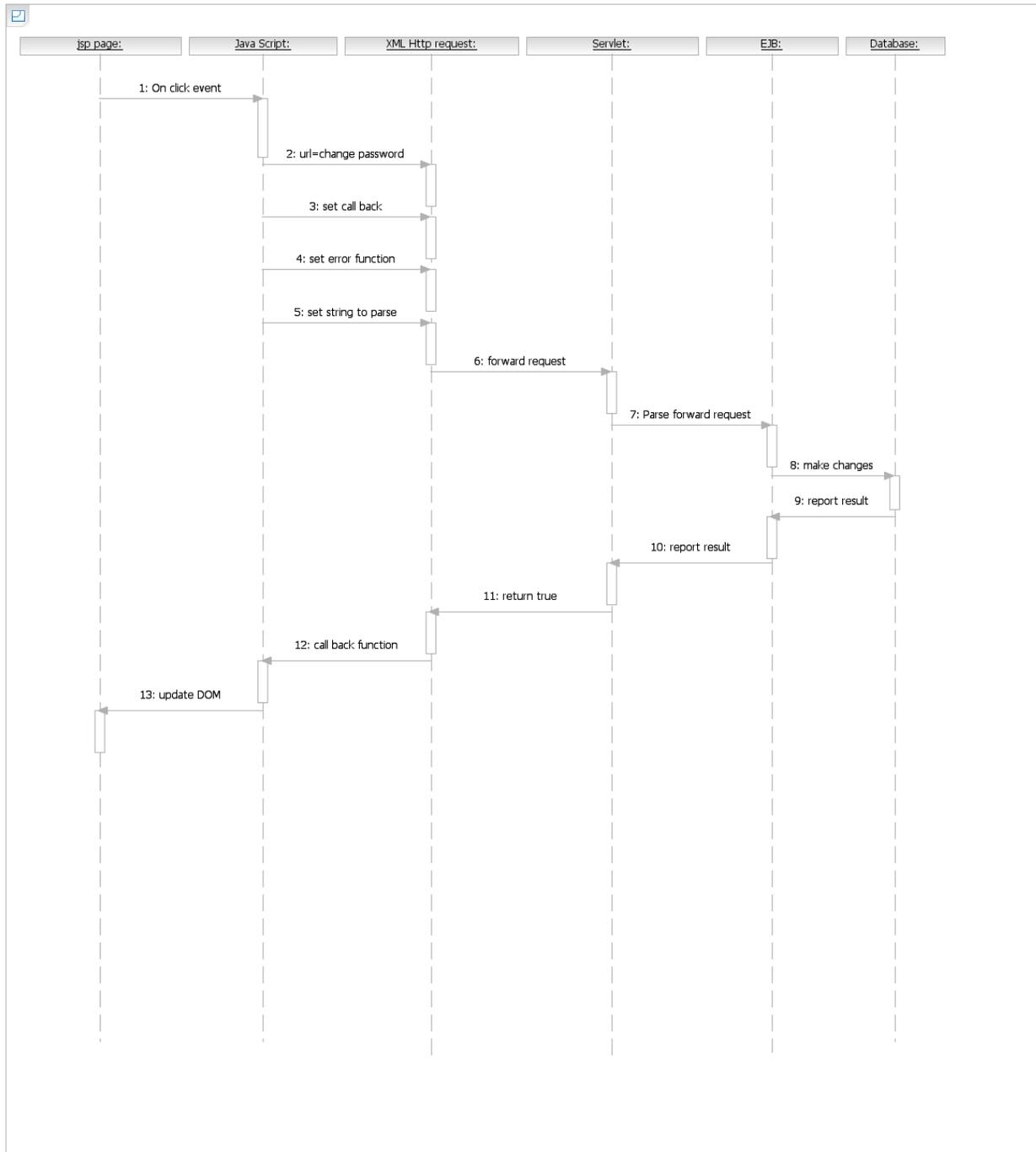
**Description:** client enters the new password in order to replace his existing password.

**Preconditions:** The user account is exists in the database and user has logged in.

**Normal flow of events:**

- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ The Servlet checks against database and returns true.
- ✓ EJB makes changes to the database.
- ✓ EJB reports the change to servlet.
- ✓ Servlet similarly reports back to the JSP which updates the DOM.

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- **View help:**

A 24x7 help feature would be provided. The help is available both online and offline. The user may access help feature that is convenient to him.

- **Customize profile:**

To give user a better look and feel, the system boasts several kinds of skins and theme. The user can customize his profile by selecting one from the available.

**Name of use case:** Customize profile

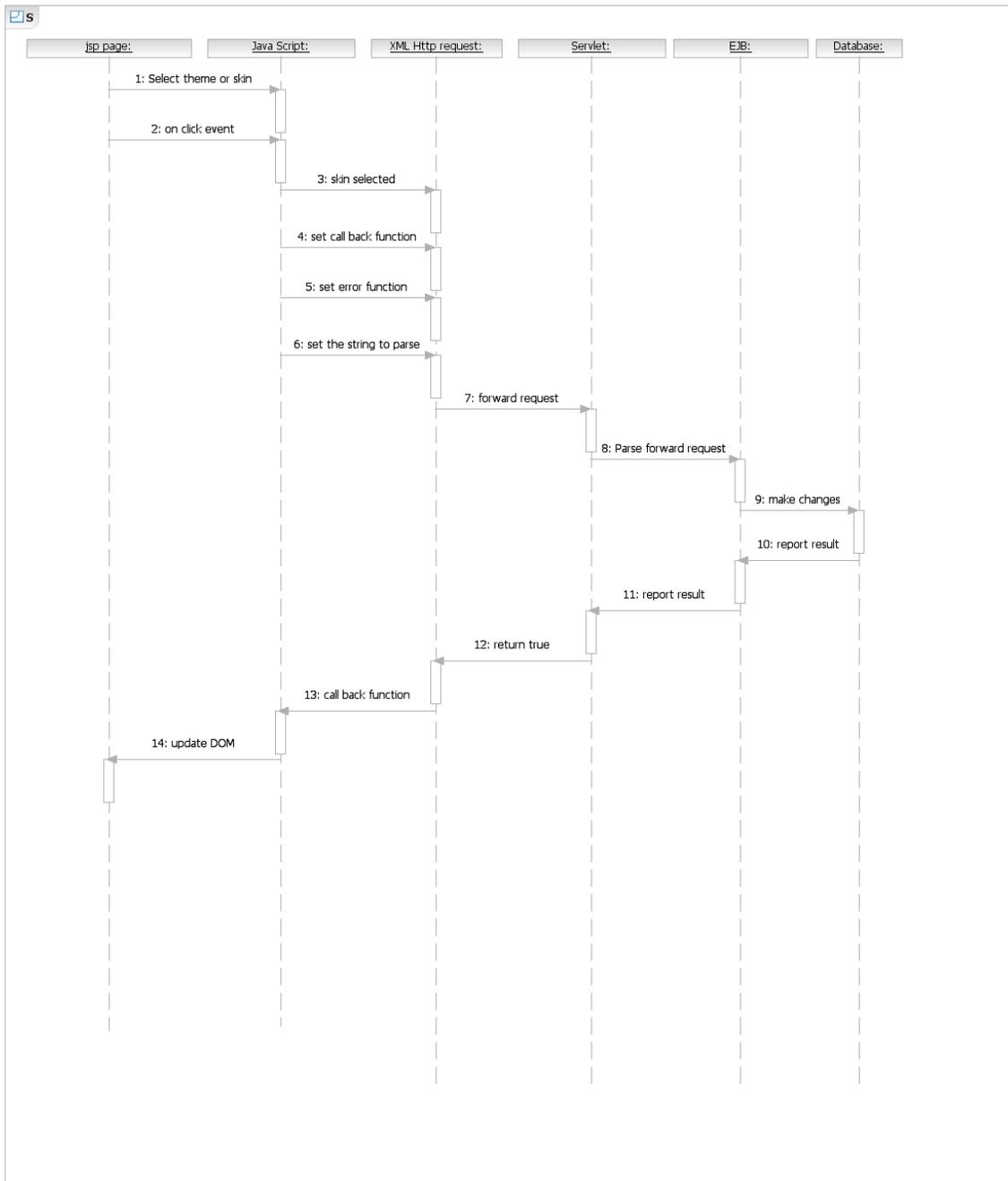
**Description:** client customizes his/her profile by choosing from predefined skins.

**Preconditions:** The user account is exists in the database and user has logged in.

**Normal flow of events:**

- ✓ The client chooses the skin.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB makes changes to the database.
- ✓ EJB reports the change to servlet.
- ✓ Servlet similarly reports back to the JSP
- ✓ JSP updates the DOM.

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## User Specific Functionalities:

### Police:

- **Search Prisoner**

A police user may use the system to search for a prisoner detail based on some search condition.

**Name of use case:** Search Prisoner

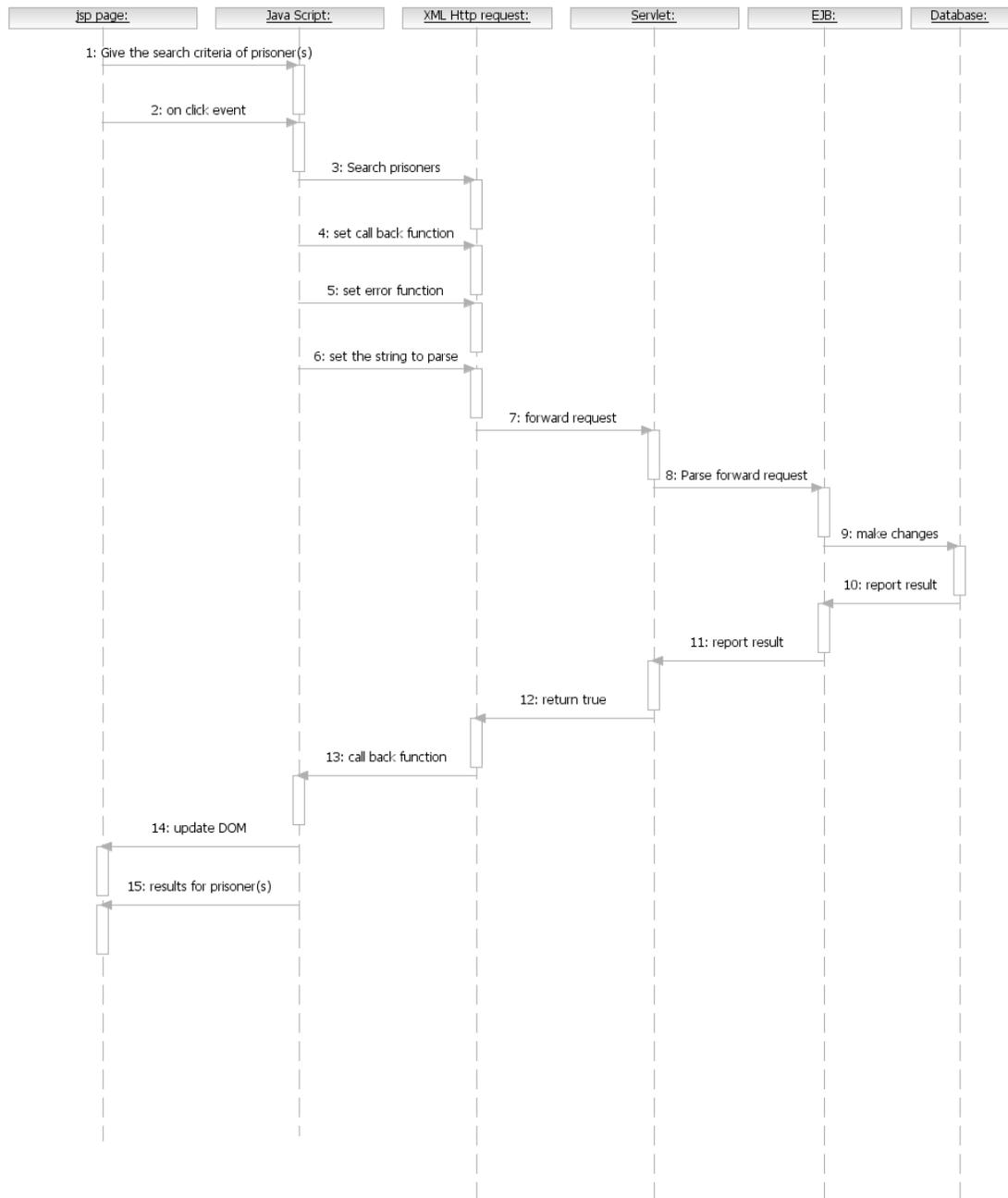
**Description:** Police user searches for a prisoner by providing search conditions.

**Preconditions:** The user account exists in the database and user has logged in.

**Normal flow of events:**

- ✓ The client provides the search criteria.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB queries the database.
- ✓ EJB reports the change to servlet.
- ✓ Servlet similarly reports back to the JSP
- ✓ JSP updates the DOM to provide the result of the search.

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- **View Prisoner**

A police user may view the searched prisoner.

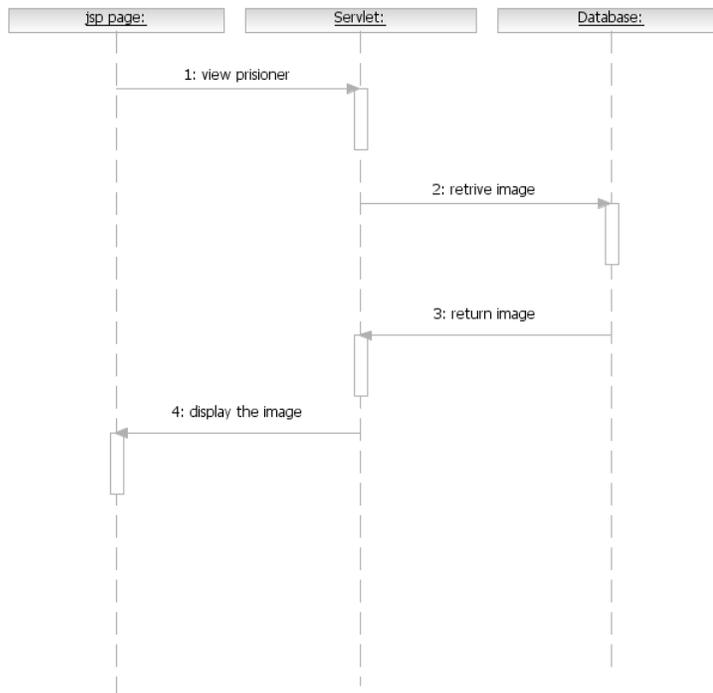
**Name of use case:** View prisoner

**Description:** Police user may view the searched prisoner.

**Preconditions:** The user account exists in the database; user has logged in and has perquisite privileges.

**Normal flow of events:**

- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet queries the database.
- ✓ Servlet gets the image from database.
- ✓ Servlet responds to Jsp page back.
- ✓ JSP updates the DOM to display the report.



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- **Export to Pdf**

After making search the police user may export the result of the search in a pdf format for offline use and other purposes.

- **Send Private Message**

In case that a new police officer has been deputized on special duty, A new user record has to be created .this must be indicated to the Super Admin user. In such case a private message may be sent to Super Admin requesting the necessary providing sufficient details.

## **JAIL ADMIN:**

- **Generate Report for Jail**

The jail admin user may generate various reports that are specific to the prison he/she manage. The graphical reports generated may range from funds report to the prisoner report.

**Name of use case:** Generate report for jail

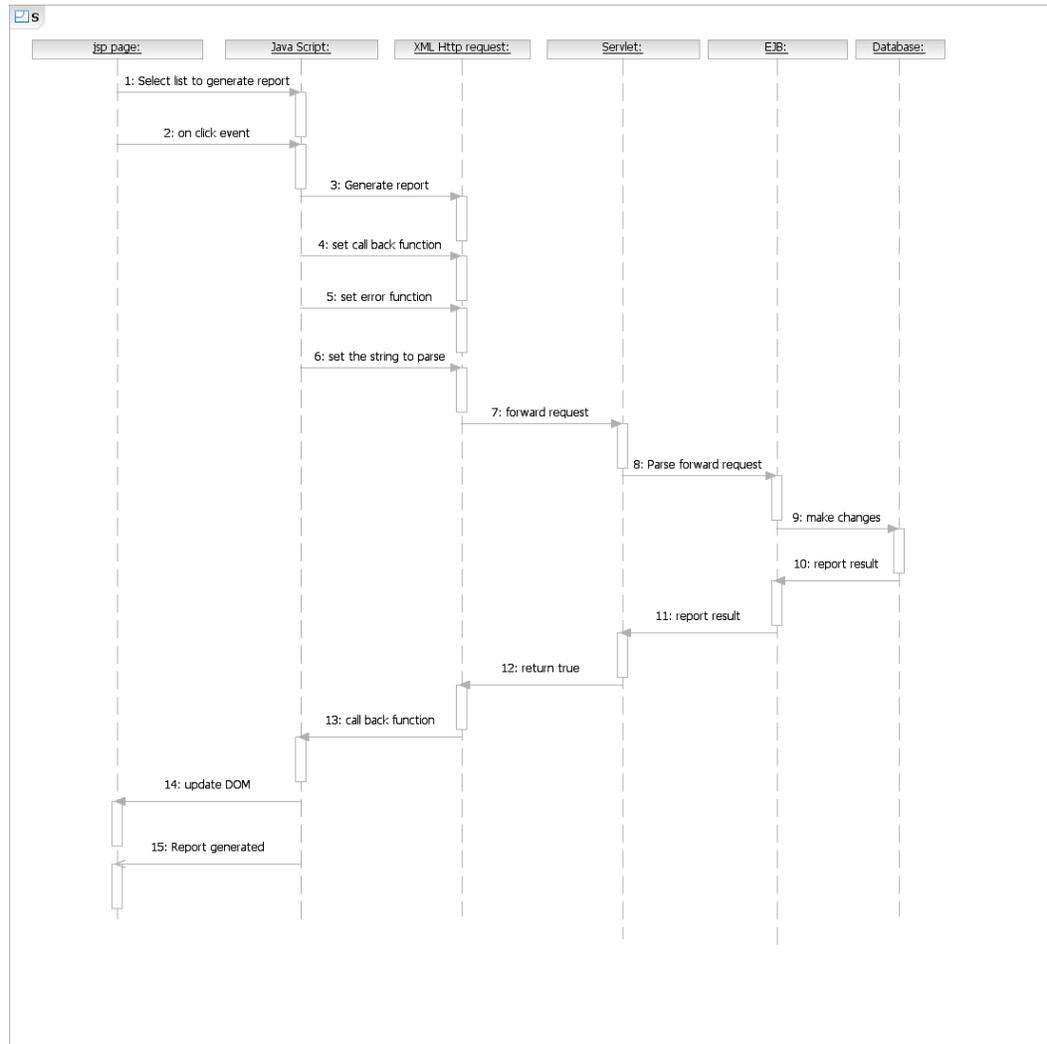
**Description:** Jail admin user generates report for his/her prison.

**Preconditions:** The user account exists in the database; user has logged in and has perquisite privileges.

**Normal flow of events:**

- ✓ The client provides the lists to generate report.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB queries the database.
- ✓ EJB generate the report and forward it to servlet.
- ✓ Servlet similarly forwards the report back to the JSP
- ✓ JSP updates the DOM to display the report.

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- **View Diary generator**

The jail Admin may view automatic diary generated to plan the day's activities. He/she may also specify conditions for diary generation.

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## Government Official:

- **Generate report**

**Name of use case:** Generate report

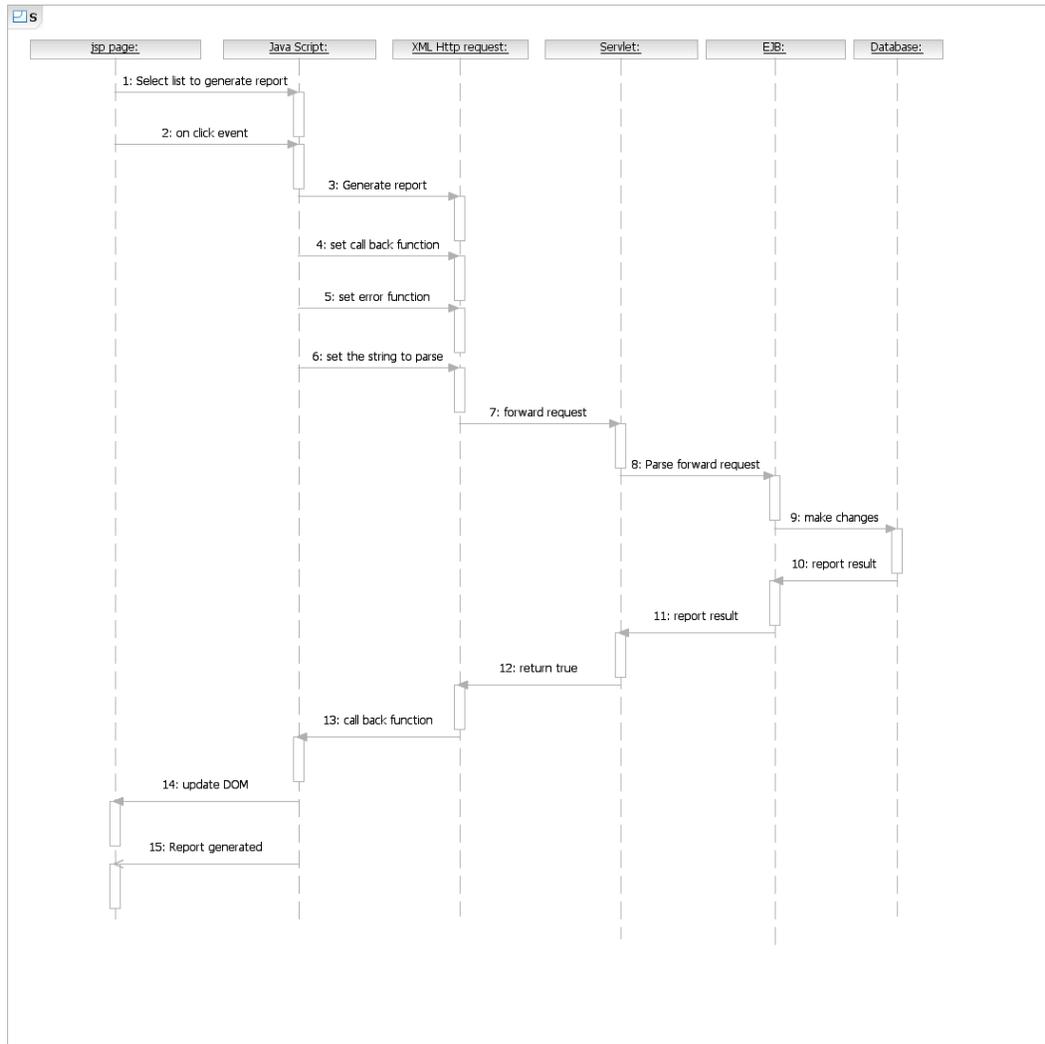
**Description:** government official user generates a cumulative report.

**Preconditions:** The user account exists in the database; user has logged in and has prerequisite privileges.

**Normal flow of events:**

- ✓ The client provides the lists to generate report.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB queries the database.
- ✓ EJB generate the report and forward it to servlet.
- ✓ Servlet similarly forwards the report back to the JSP
- ✓ JSP updates the DOM to display the report.

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The government official may generate graphical report to make comparison among various prisoners. Further the report generation is limited to a prison or prison in particular state. The report may serve as a tool for these users in future decision making.

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## Data Manager:

- **Track Prisoner Detail**

Data Manager User is provided with functionality of tracking prisoner's details. This includes creation new prisoner record and updating existing record.

**Name of use case:** Add prisoner

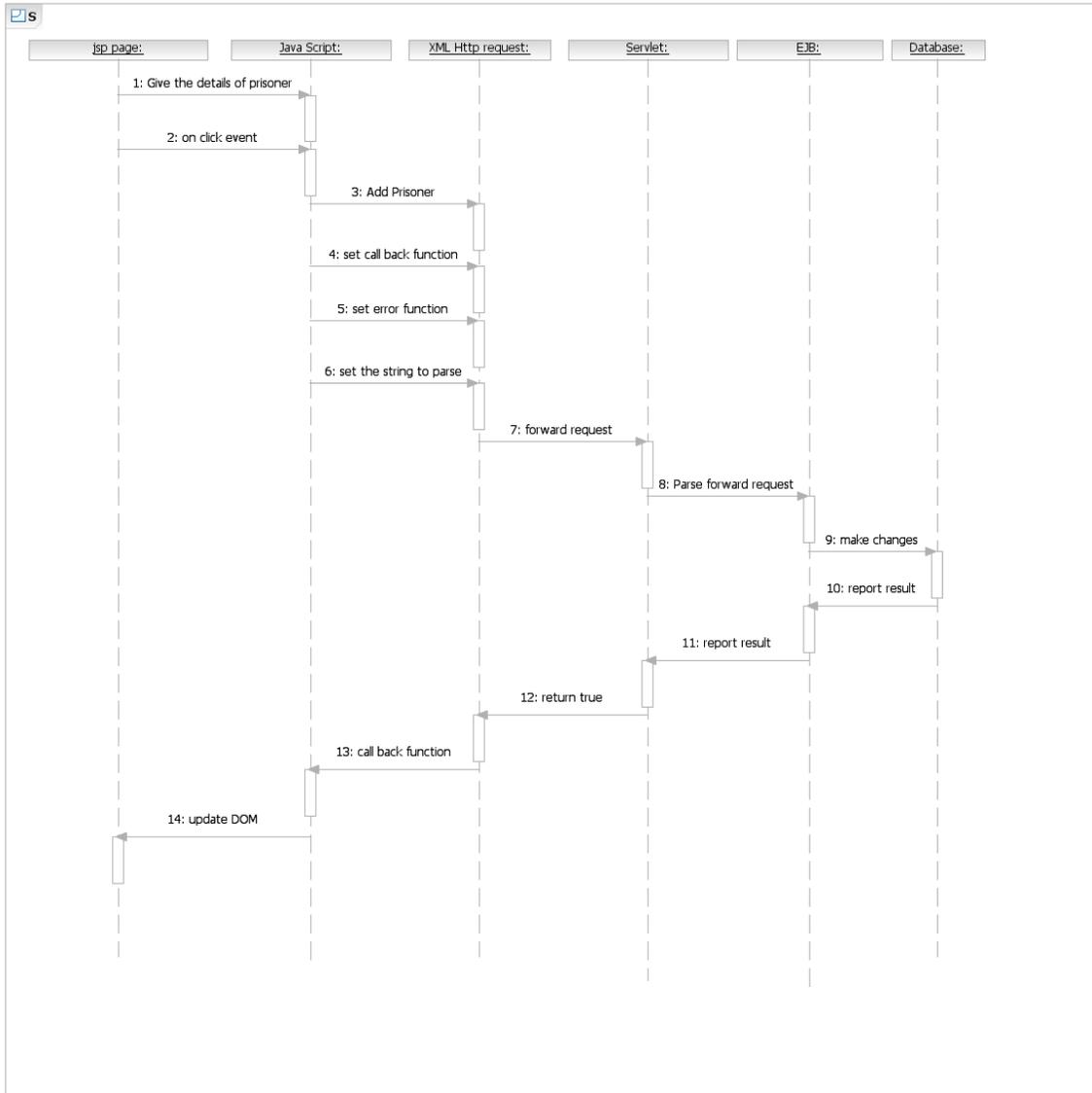
**Description:** Data manager user adds new prisoner details.

**Preconditions:** The user account exists in the database; user has logged in and has perquisite privileges.

**Normal flow of events:**

- ✓ The client provides the details of the prisoner.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB insert details into database.
- ✓ EJB generate the report and forward it to servlet.
- ✓ Servlet similarly forwards the report back to the JSP
- ✓ JSP updates the DOM to display the report.

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- **Track Parole Detail**

Prisoners are granted 14 days holiday per year which may be availed as whole or in part. In such a case they are sent on parole. Tracking the parole detail is done by Data manager

- **Track Fund Detail**

Government and Non-governmental organization allocates fund to each prison for its maintenance and upkeep. The allocation and expenditure of these funds are tracked by Data Manager.

**Name of use case:** Add Fund Details

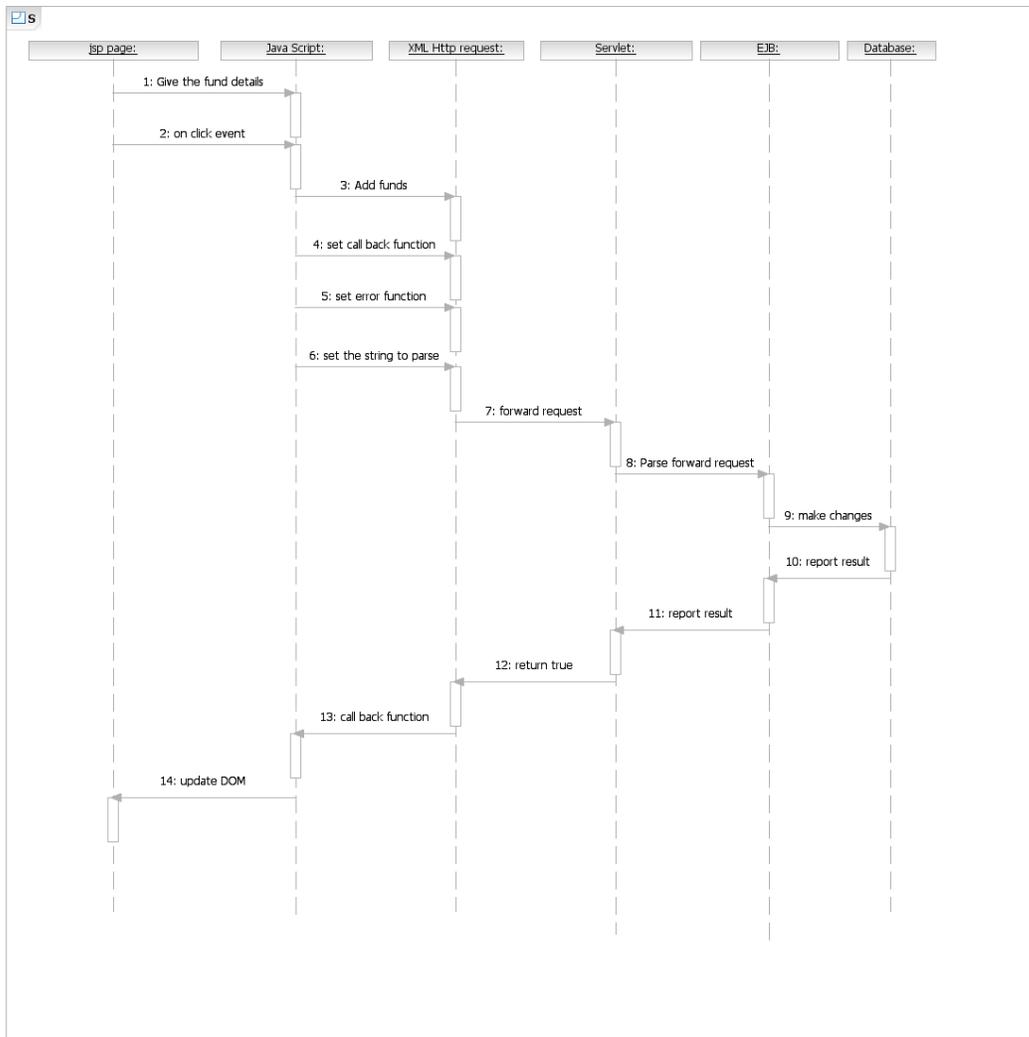
**Description:** Data manager user may add fund details.

**Preconditions:** The user account exists in the database; user has logged in and has prerequisite privileges.

**Normal flow of events:**

- ✓ The client provides fund details.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB insert details into database.
- ✓ EJB generate the report and forward it to servlet.
- ✓ Servlet similarly forwards the report back to the JSP
- ✓ JSP updates the DOM to display the report.

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- **Track Staff Detail**

Data manager keeps track of various staff details such as transfer of staff, promotion and retirement.

**Name of use case:** Add Staff Detail

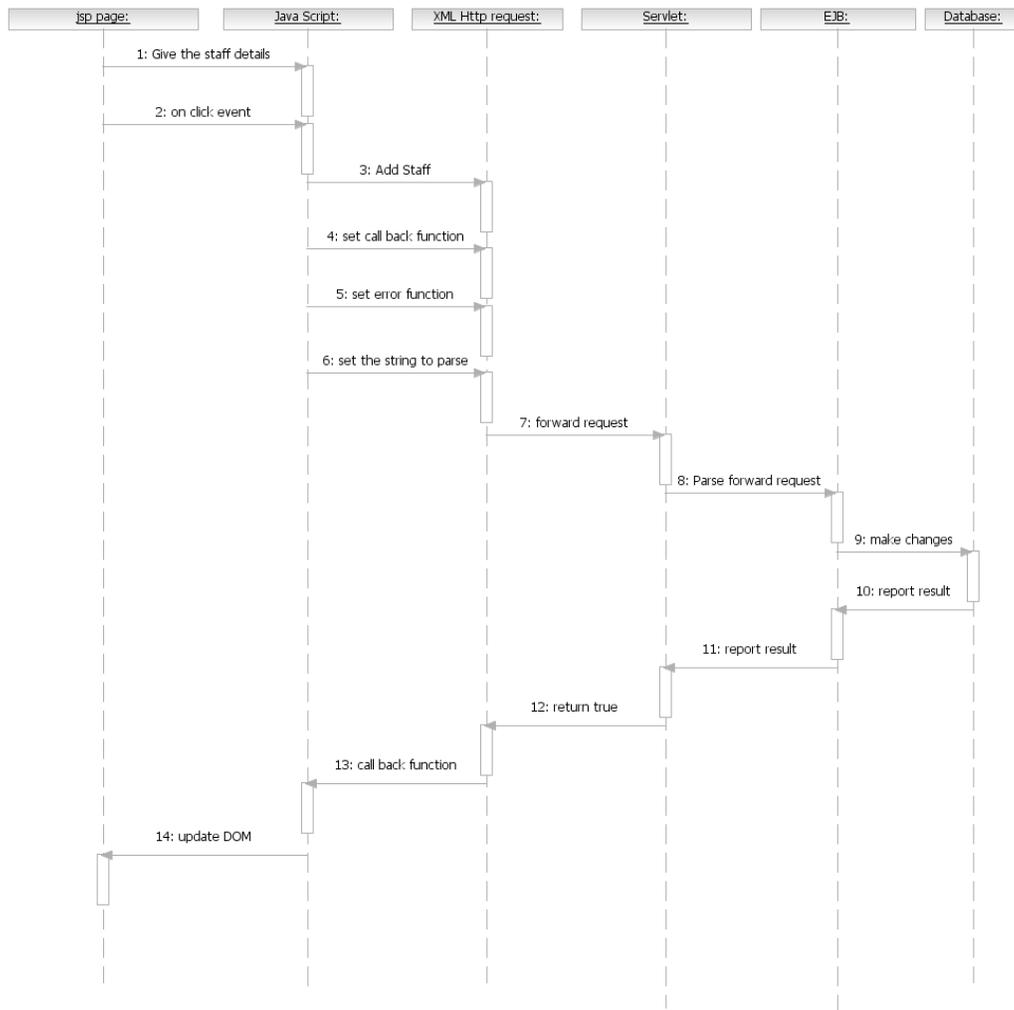
**Description:** Data manager user adds staff details.

**Preconditions:** The user account exists in the database; user has logged in and has requisite privileges.

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**Normal flow of events:**

- ✓ The client provides staff details.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB insert details into database.
- ✓ EJB generate the report and forward it to servlet.
- ✓ Servlet similarly forwards the report back to the JSP
- ✓ JSP updates the DOM to display the report.



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- **Track Duty Detail**

Data manager keeps track of various duty details such as posting and shift changes

- **Track Interview Detail**

Prisoner is allowed to meet with relatives and well wisher upon request made by the relative.

The detail of these interviews is tracked by Data Manager.

- **Diary Generation**

Data Manager may generate various diaries such as release diary, parole diary, etc. The generated diary helps to perform other activities of Data Manger.

## **Gate Keeper:**

- **Track Staff in/out detail**

Gate keeper may tracks various staff entering the prisoner

- **Track non-Staff in/out detail**

Gate keeper may track various non staff such as electrician, plumber etc entering the prison

- **Track prisoner in/out detail**

Gate keeper may track prisoner in & out detail. This include prisoner leaving jail on parole or medical reason

**Name of use case:** Insert into In-Out register

**Description:** Data manager user inserts record into in-out register.

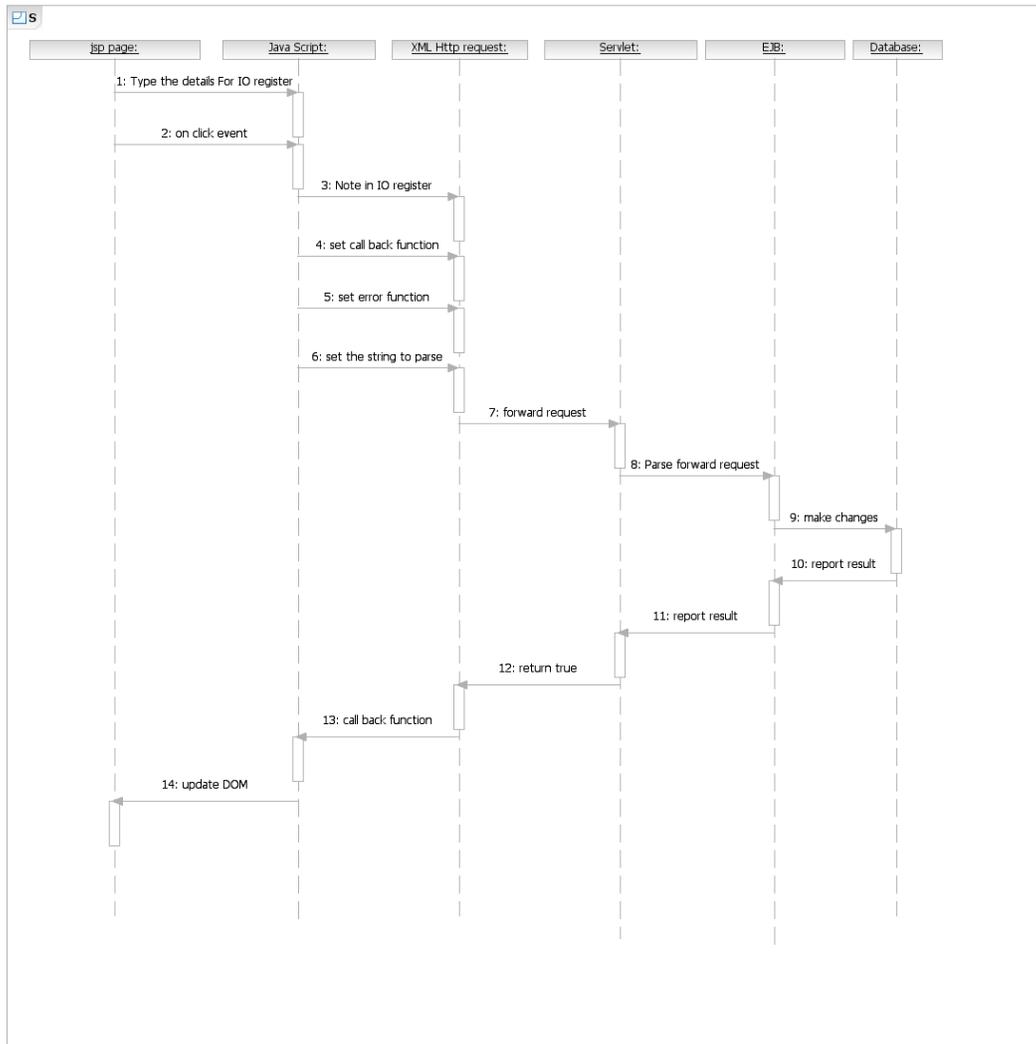
**Preconditions:** The user account exists in the database; user has logged in and has perquisite privileges.

**Normal flow of events:**

- ✓ The client provides the details.
- ✓ The client chooses the type of register.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB insert details into database.

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- ✓ EJB generate the report and forward it to servlet.
- ✓ Servlet similarly forwards the report back to the JSP
- ✓ JSP updates the DOM to display the report.



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- **Modify in/out detail**

Gate keeper may modify errata in tracked in/out detail

- **Generate report**

Gate keeper may generate a reports based on the statistic in various in/out register

### **Super Admin:**

- **Add Prison**

Super admin add a new prison easily.

**Name of use case:** Add prison

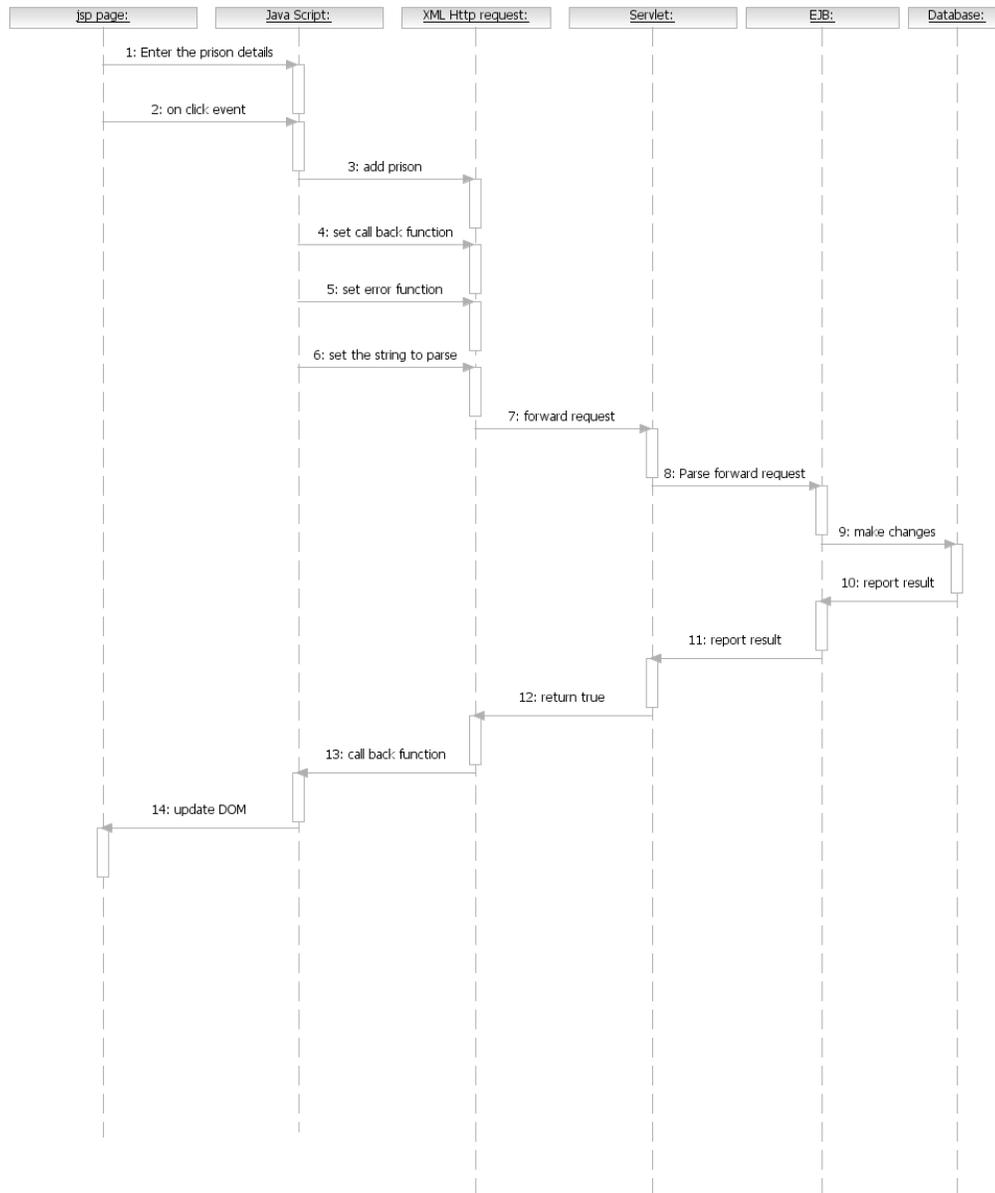
**Description:** Super user may add new prison.

**Preconditions:** The user account exists in the database; user has logged in and has perquisite privileges.

**Normal flow of events:**

- ✓ The client provides the prison details.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB insert details into database.
- ✓ EJB generate the report and forward it to servlet.
- ✓ Servlet similarly forwards the report back to the JSP
- ✓ JSP updates the DOM to display the report.

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- **Change Database Location**

Super Admin may change the IP address and port no of database location easily.

**Name of use case:** Change database location

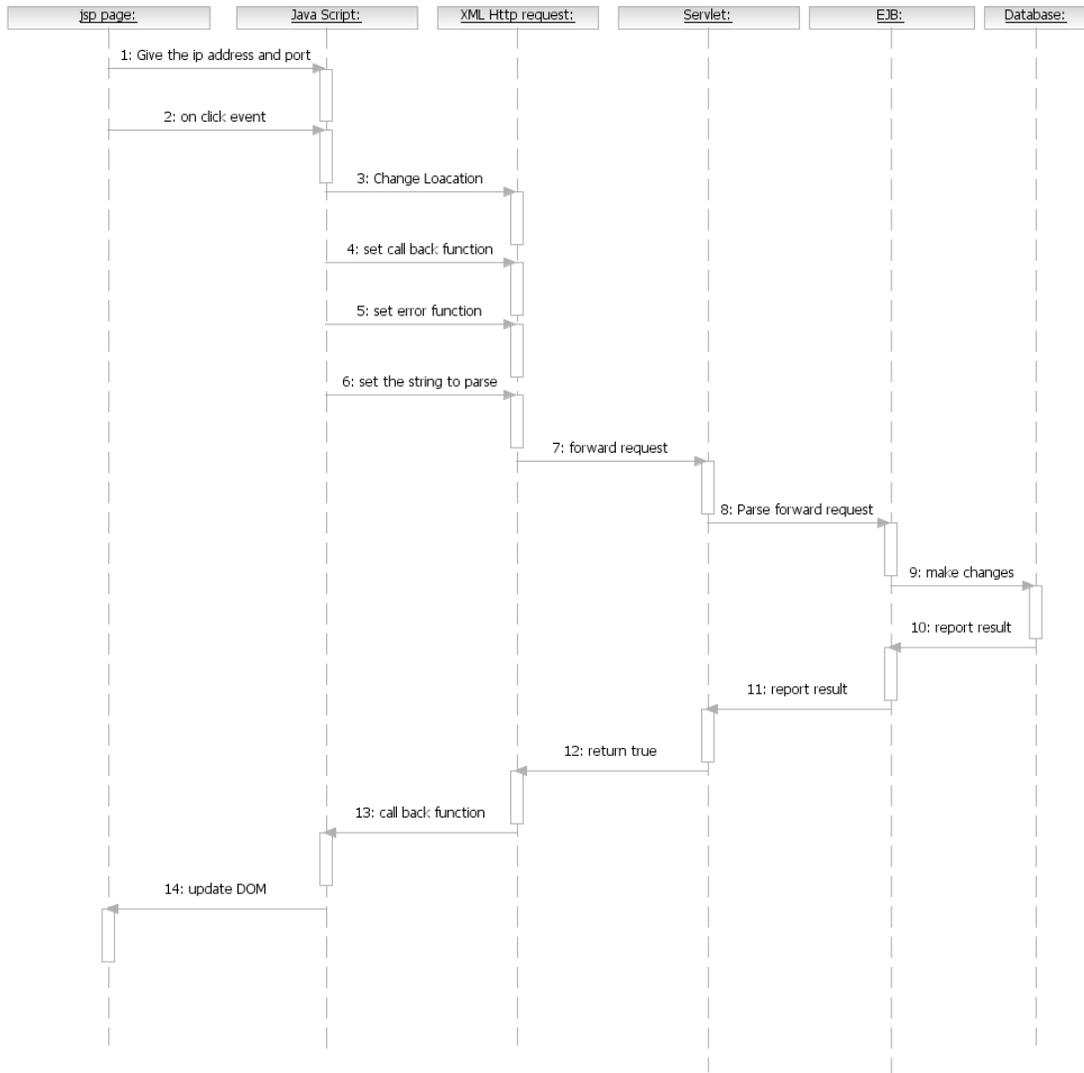
**Description:** Super user may change IP address and port of database location.

**Preconditions:** The user account exists in the database; user has logged in and has prerequisite privileges.

**Normal flow of events:**

- ✓ The client provides IP address and port number.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB makes changes to database.
- ✓ EJB generate the report and forward it to servlet.
- ✓ Servlet similarly forwards the report back to the JSP
- ✓ JSP updates the DOM to display the report.

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- **Performance Tuning**

Super Admin may perform various performance tunings like index creation upon viewing the log file

- **View Log**

A log file is maintained for all important activity performed by each user. Super Admin may view this log file to do his/her other activities exemplary manner

- **Detect Intruder**

Upon viewing the log file Super admin detect any intruder to the System

- **Add User**

Super Admin may add a new user of the system.

**Name of use case:** Add new user

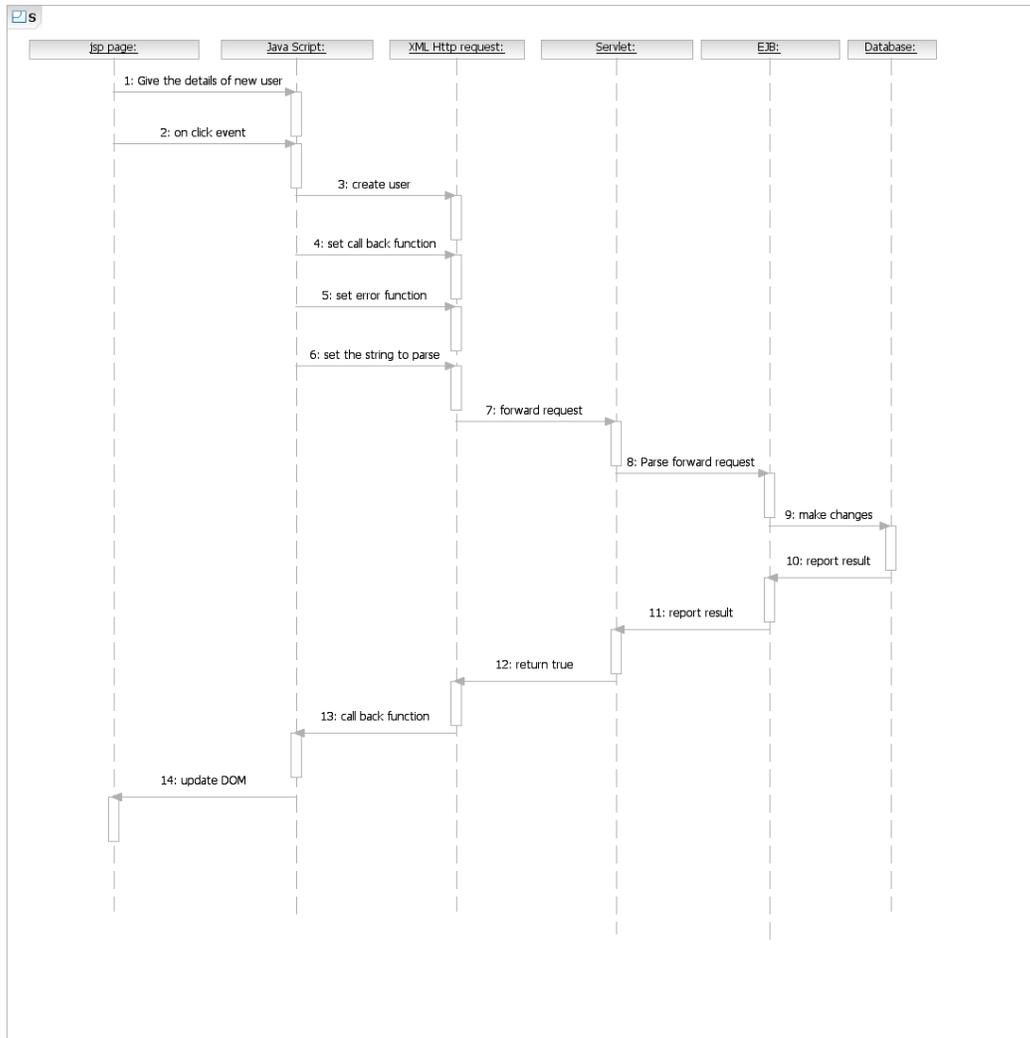
**Description:** Super user may add new user to the system.

**Preconditions:** The user account exists in the database; user has logged in and has perquisite privileges.

**Normal flow of events:**

- ✓ The client provides the user details.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB insert details into database.
- ✓ EJB generate the report and forward it to servlet.
- ✓ Servlet similarly forwards the report back to the JSP
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- **Remove User**

Super Admin may remove an existing user of the system

- **Read Private Message**

Super admin can read private message sent by police and jail admin users. These messages illustrate creation/deletion of user.

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- **Make Back up**

Super Admin may make a back of the Database

- **Add Skin**

Super Admin may add new skins.

**Name of use case:** Add skin

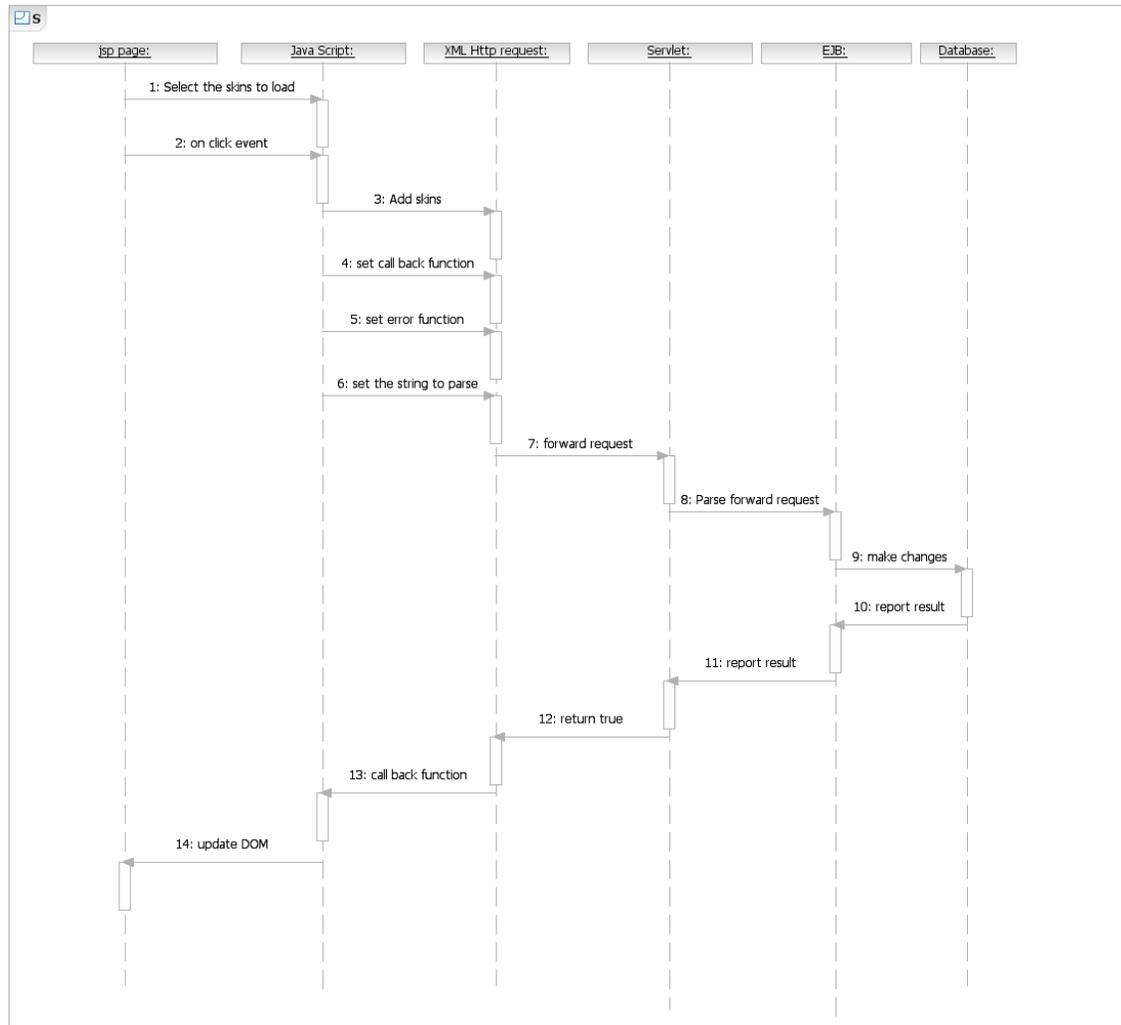
**Description:** Super user generates may add new skin details.

**Preconditions:** The user account exists in the database; user has logged in and has perquisite privileges.

**Normal flow of events:**

- ✓ The client provides skin details.
- ✓ The client clicks the button.
- ✓ Jsp page asynchronously requests the servlet.
- ✓ Servlet forwards the request to EJB.
- ✓ EJB insert details into database.
- ✓ EJB generate the report and forward it to servlet.
- ✓ Servlet similarly forwards the report back to the JSP
- ✓ JSP updates the DOM to display the report.

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### 3.2 Supplementary Requirements

- **24 x 7 Availability** - If the base is now the entire world, staying open 24 hours a day becomes critical. Because system can be an automated Process, so it can stay open for 24 hours a day. So UPS support must be on server site for at least 8 hours in case of power failure. System will remain inaccessible to users at 2:00 to 4:00 am for backup and maintenance purpose.
- **Dynamic Website** - Many early Web implementations consisted of static HTML pages. This becomes very difficult to manage if the number of pages gets too large. An effective system should be largely dynamic taking advantage of technology that automates this process rather than relying on manual processes. Application should serve dynamic user based customized web pages to its clients from server.
- **Integration with existing enterprise systems** – Any existing Web site that relies on the manual duplication of data from another system is one that can be improved. Most of the business data in the world today exists in enterprise servers that can be connected to the Web servers to make this process far more effective.
- **Provide good performance and the ability to scale the server** – The Web application Server should provide good performance and the ability to manage performance with techniques, such as support for caching, clustering, and load balancing.
- **Providing session management capability** - Web application developers should not spend valuable time worrying about how to maintain sessions within the application. The Web Application Server should provide these services.

#### 4. Concerns / Queries / Doubts if any:

We tried to install IBM Rational Application Server (Version: 7.0.0.6) along with **Websphere Application Server** in **Ubuntu 8.04**.

While **WAS version 6.1** failed to install **WAS version 6.0** installed successfully. But the problem now is that we are not able to start the Server through “Add Server” option. Help us to get rid of this problem.