WOMENSAFEQ MANAGEMENT SYSTEM

Technology Used: Core Java, JDBC, MySQL Database
Project Type: Console-Based Application

1. Introduction:

The WomenSafeQ Management System (WomenSafeQMS) is a backend application designed to help ensure the safety of women in emergency situations. It allows women to register their details, send SOS requests during danger, and access helpline contacts easily.
The system also keeps a record of officers and helpline numbers who can provide immediate help. It is developed using Core Java, MySQL, and JDBC, following the MVC (Model-View-Controller) design pattern.
This project mainly focuses on building the backend part that can later be connected to a mobile app or website for real-time safety support.

2. Objective:

- To store and manage details of registered women safely.
- To provide a system for sending and tracking SOS requests.
- To maintain a list of officers and helpline numbers for quick assistance.
- To perform CRUD (Create, Read, Update, Delete) operations on all data.
- To design a database that supports efficient data storage and retrieval.
- To build a structured and reusable backend using the MVC approach.

3. Entities / Modules:

Women Module:

- Stores and manages details of women such as name, age, contact number, email, and address.
- Allows update or deletion of records.

Complaint Module:

- Allows women to register complaints against harassment or safety issues.
- Stores details like complaint ID, woman ID, complaint type, description, and status.
- Officers can view, update, and mark complaints as resolved.

Office Module:

- Keeps information about safety officers including their name, designation, and contact number.
- Helps in assigning officers to SOS requests.

Helpline Contacts Module:

- Stores emergency helpline numbers such as police, ambulance, or women's helpline.
- Can be viewed anytime for quick support.

SOS Requests Module:

- Records SOS requests made by registered women.

- Saves details like woman ID, location, date/time, and status (resolved or not).

4. Database Design (MySQL)

Table 1: Women

```
CREATE TABLE women (
woman_id INT PRIMARY KEY AUTO_INCREMENT,
full_name VARCHAR(100) NOT NULL,
age INT CHECK (age >= 10 AND age <= 100),
mobile_number VARCHAR(15) UNIQUE NOT NULL,
email VARCHAR(100),
address VARCHAR(255)
);
```

Table 2: Complaints

```
CREATE TABLE complaints (
   complaint_id INT PRIMARY KEY AUTO_INCREMENT,
   woman_id INT,
   complaint_type VARCHAR(100),
   description TEXT,
   complaint_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
   status VARCHAR(20) DEFAULT 'Pending',
   FOREIGN KEY (woman_id) REFERENCES women(woman_id)
);
```

Table 3: Officers

```
CREATE TABLE officers (
   officer_id INT PRIMARY KEY AUTO_INCREMENT,
   officer_name VARCHAR(100),
   designation VARCHAR(100),
   contact_number VARCHAR(15)
);
```

Table 4: Helpline Contacts

```
CREATE TABLE helpline_contacts (
   helpline_id INT PRIMARY KEY AUTO_INCREMENT,
   helpline_name VARCHAR(100),
   contact_number VARCHAR(15),
   description VARCHAR(255)
);
```

Table 5: SOS Request

```
CREATE TABLE sos_requests (
   sos_id INT PRIMARY KEY AUTO_INCREMENT,
   woman_id INT,
   location VARCHAR(255),
   timestamp TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
   resolved BOOLEAN DEFAULT FALSE,
   FOREIGN KEY (woman_id) REFERENCES women(woman_id)
);
```

5. Functionalities Implemented

Women Module

- Add a new woman's details
- View all registered women
- Update or delete existing records

Complaint Module

- Register a new complaint
- View all complaints
- Update complaint status
- Delete complaint record if necessary

Officer Module

- Add and view officer details
- Manage officer information

Helpline Module

- Add new helpline numbers
- View all helpline contacts

SOS Request Module

- Create a new SOS request linked to a woman
- View all SOS requests
- Update request status (resolved or unresolved)

6. Technologies Used:

Component	Technology
Programming Language	Core Java
Database	MySQL
Connectivity	JDBC (Java Database Connectivity)
Architecture	MVC(Model-View-Controller)
IDE	Eclipse

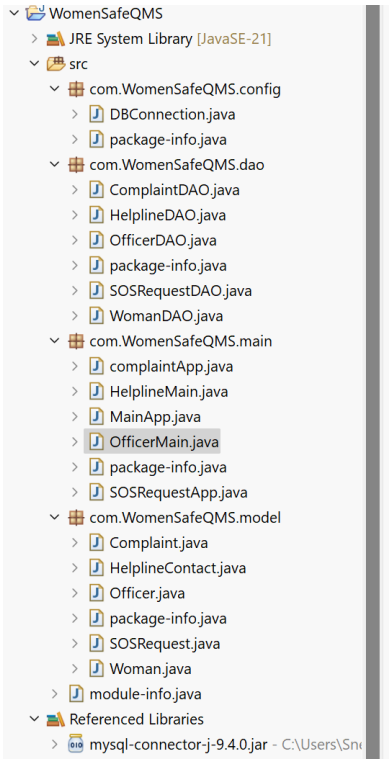
7. Learning Outcomes:

By completing this project, I learned:

- How to connect Java applications with MySQL using JDBC.
- How to create and manage a relational database.
- How to perform CRUD operations using SQL queries.
- How to organize code using the MVC architecture.
- The importance of structured backend development for real-world systems.
- Better understanding of exception handling and data validation in Java.

8. Result

Structure of the Project



WomenSafeQ Management

```
===== WomenSafeQ Management System =====
1. Add Woman
2. View All Women
3. Update Woman
4. Delete Woman
5. Exit
Enter choice: 2
ID: 2 | Name: Sneha Sahu | Age: 21 | Mobile: 9876543245 | Email: snehasahu7@gmail.com | Address: Mumbai
ID: 3 | Name: Neha Sahu | Age: 19 | Mobile: 7764382736 | Email: nehasahu@gmail.com | Address: Mumbai
ID: 4 | Name: Satyam Shukla | Age: 21 | Mobile: 8976574532 | Email: satyamshukla@gmail.com | Address: Mumbai
ID: 5 | Name: Ankit Jha | Age: 22 | Mobile: 7648382349 | Email: ankitjha@gmail.com | Address: Mumbai
ID: 6 | Name: Jhiya Shukla | Age: 22 | Mobile: 9876345787 | Email: Jhiyashukla@gmail.com | Address: Mumbai
```

WomenSafeQ Helpline Management

```
===== WomenSafeQ Helpline Management =====
1. Add Helpline
2. View All Helplines
3. Update Helpline Number
4. Delete Helpline
5. Exit
Enter your choice: 2

--- Helpline Contacts ---
ID: 2
Department: Police Helpline
Contact: 100
-------------------------
ID: 3
Department: Women Helpline
Contact: 1091
-------------------------
ID: 4
Department: Child Helpline
Contact: 1098
-------------------------
ID: 5
Department: Fire Emergency
Contact: 101
-------------------------
ID: 6
Department: Ambulance/ Medical Help
Contact: 102
-------------------------
```

WomenSafeQ Officer Management

```
===== WomenSafeQ Officer Management =====
1. Add Officer
2. View All Officers
3. Update Officer Phone
4. Delete Officer
5. Exit
Enter your choice: 2

--- Officers List ---
ID: 1
Name: Ramesh
Designation: Police Officer
Phone: 9876467896
Email: ramesh@gmail.com
----------------------
ID: 2
Name: Priya
Designation: Police Officer
Phone: 6578964567
Email: priya@gmail.com
----------------------
ID: 3
Name: Anil
Designation: Senior Officer
Phone: 6788545675
Email: anil@gmail.com
----------------------
ID: 4
Name: Sunita
Designation: Inspector
Phone: 9864568765
Email: sunita@gmail.com
----------------------
ID: 5
Name: Karan
Designation: Sub Inspector
Phone: 9863452317
Email: karan@gmail.com
----------------------
```

9. Conclusion:

The WomenSafeQ Management System is a useful backend application that focuses on women's safety. It provides a way to manage user records, SOS requests, officers, and helpline numbers in an organized manner.

The project is simple but powerful and can be further developed by adding features like message alerts, live tracking, and user authentication. It also provides a strong foundation for learning backend development using Java and MySQL.