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# **Software Test Specification**

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# 1 Introduction:

This document is a software test specification of the Online Judiciary software created as part of the software engineering lab project.

## 1.1 Purpose

The purpose of the STS is to describe the plan for testing the software, and to specify the test cases and test procedures necessary to demonstrate that the software satisfies the requirements as specified in the project's Software Requirements Specification document.

## 1.2 Scope

The plan contains a list and brief description of the use cases to be tested and the software components associated with each test case. The test specification includes a list of the features to be tested for each of the use cases, the description each test case needed to fully test the use case, and the test procedures, or steps, necessary to execute each of the test cases.

## 1.3 References

1.H.Freeman, "Software testing", IEEE Instrumentation & Measurement & Measurement Magazine, Sep 2002.

2.829-2008 - IEEE Standard for Software and System Test Documentation, revision of IEEE std 829-1998

## 2. Test plan description

The online judiciary software has various features which allows a victim to get legal aid with ease and all in the comfort of his home. The victim can find lawyers or find the appropriate police stations easily on the website and lodge his/her complaint.

### 2.1 Features to be tested

#### 2.1.1 Registration

1. Victim registration
2. Lawyer registration
3. Police registration

#### 2.1.2 Login

1. Victim login
2. Lawyer login
3. Police login

#### 2.1.3 Place a case with lawyer

#### 2.1.4 Place a case with police

#### 2.1.5 View case

1. Victim
2. Lawyer
3. Police

## 3. TEST DESIGN SPECIFICATION

### 3.1 Testing Approach

We used the SRS to prepare the design test cases and their procedures. These tests are designed to verify the documentation previously listed.

#### Interface testing

Our software has three types of users and so the information from these components must be passed between each other and to other components throughout the application.

Interface testing will be used to evaluate whether these components pass data and control correctly to one another.

## **Black box testing**

Online Judiciary is an interactive frontward-facing web application. Due to the nature of the application, we will be conducting manual testing on the web page to ensure that the application reacts and responds in the way that it is expected to.

### **3.2.Feature or Combination of Features Not To Be Tested**

Server Reliability - Server uptime and reliability will not be tested as the server is provided by a third party and its reliability depends on the third party

Response time - The time taken for any page to load will not be tested as it depends on the browser and the CPU being used

System availability - It checks how many users can connect with the system at the same time.

### **3.3 Environmental Needs**

This subsection contains the properties that are needed to test the online judiciary application. An environment matching the following criteria can be used in tests, and will later be referred to as Acceptance Server

#### **Client**

- The environment will have a network connection. Preferably the environment will have a wireless connection to simulate the network environment under which a typical user will access the online judiciary application.
- The environment will be able to run the web browser specified by a given test.
- That web browser will have JavaScript enabled.

#### **Server**

- The environment will access a test application database, used for storing application usage statistics.

## **4. TEST SPECIFICATION**

This section contains subsections for each of the features to be tested. Each subsection specifies the USE CASES to be tested, the procedures necessary to run the test cases, and the items being tested. Use Cases spanning multiple features will be listed multiple times, but specified only in their first appearance

### **4.1 Manual Testing:**

## Testing Activities

### Manual Testing

Test case id	STS 1
Test name	Victim registration
Description	Ensure that the victim registration form opens up properly and the user is able to fill in all the details.
Test environment	Google Chrome
Test strategy	Black box testing

Manual test procedure		
Steps	Description	Expected Results
1	Open the application in the browser.	The application is displayed correctly
2	Click on user login	Opens up the next which shows three types of user logins
3	Click on victim login	Opens up the next page which asks for the victim username and password, and also displays signup option if user doesn't have an account.
4	Click on signup	Opens up the form which asks for the user details required to create a new account.
5	Enter all the required details to register your account	All the details are entered and if any detail doesn't meet any requirement it won't be accepted, eg a poor password or wrong email format
6	Click signup	This creates the user account and opens the user home page

# Hey,Welcome to the sign up page for victim

Phone:

Address:

Username:  Required. 150 characters or fewer. Letters, digits and @/./+/-/\_ only.

Password:

Your password can't be too similar to your other personal information.  
Your password must contain at least 8 characters.  
Your password can't be a commonly used password.  
Your password can't be entirely numeric.

Password confirmation:  Enter the same password as before, for verification.

Email address:

## Manual Testing

Test case id	STS 2
Test name	Lawyer registration
Description	Ensure that the lawyer registration form opens up properly and the user is able to fill in all the details.
Test environment	Google Chrome
Test strategy	Black box testing

This testing is done by following the same sequence of steps as followed for testing victim registration.

## Hey, Welcome to the sign up page for Lawyer

Phone:

Address:

Username:  Required. 150 characters or fewer. Letters, digits and @/./+/-/\_ only.

Password:

Your password can't be too similar to your other personal information.  
Your password must contain at least 8 characters.  
Your password can't be a commonly used password.  
Your password can't be entirely numeric.

Password confirmation:  Enter the same password as before, for verification.

Email address:

Previous cases:

Fees:

### Manual Testing

Test case id	STS 3
Test name	Police registration
Description	Ensure that the police registration form opens up properly and the user is able to fill in all the details.
Test environment	Google Chrome
Test strategy	Black box testing

This testing is done by following the same sequence of steps as followed for testing victim registration.



## Hey, Welcome to the sign up page for police

Phone:

Address:

Username:  Required. 150 characters or fewer. Letters, digits and @/./+/-/\_ only.

Password:

Your password can't be too similar to your other personal information.  
Your password must contain at least 8 characters.  
Your password can't be a commonly used password.  
Your password can't be entirely numeric.

Password confirmation:  Enter the same password as before, for verification.

Email address:

Cases registered:

### Manual Testing

Test case id	STS 4
Test name	Victim Login
Description	Ensure that the victim login page opens up properly and the user details are authenticated before the user is able to access the system.
Test environment	Google Chrome
Test strategy	Black box testing

Manual test procedure		
Steps	Description	Expected Results
1	Open the application in the browser.	The application is displayed correctly
2	Click on user login	Opens up the next which shows three types of user logins

3	Click on victim login	Opens up the next page which asks for the victim username and password, and also displays signup option if user doesn't have an account.
4	Enter the username and password	The system authenticates the user and and if the username and password is correct, the user gets access to his account
5	Click Login	This user details are authenticated and if correct user is logged in

*Hey, Welcome to the login page for victim*

This field is required.

Username:

This field is required.

Password:

*If you are not already registered in system you can sign up here.*

#### Manual Testing

Test case id	STS 5
Test name	Lawyer Login
Description	Ensure that the victim login page opens up properly and the user details are authenticated before the user is able to access the system.
Test environment	Google Chrome
Test strategy	Black box testing

This testing is done by following the same sequence of steps as followed for testing victim registration.

Hey,Welcome to the login page for lawyer

This field is required.

Username:

This field is required.

Password:

Login

If you are not already registered in system you can sign up here.

Signup

### Manual Testing

Test case id	STS 6
Test name	Police Login
Description	Ensure that the police login page opens up properly and the user details are authenticated before the user is able to access the system.
Test environment	Google Chrome
Test strategy	Black box testing

This testing is done by following the same sequence of steps as followed for testing victim registration.

Hey,Welcome to the login page for police

This field is required.

Username:

This field is required.

Password:

Login

If you are not already registered in system you can sign up here.

Signup

## Manual Testing

Test case id	STS 7
Test name	Place case with lawyer
Description	Displays list of lawyers along with other details associated with the lawyers. Following, this the victim can choose a lawyer and lodge a case with him. The lawyer can then see the cases when he logs in with his account.
Test environment	Google Chrome
Test strategy	Interface testing, Black box testing

Manual test procedure		
Steps	Description	Expected Results
1	Open the application in the browser.	The application is displayed correctly
2	Click on user login	Opens up the next which shows three types of user logins
3	Click on victim login	Opens up the next page which asks for the victim username and password, and also displays signup option if user doesn't have an account.
4	Enter the username and password	The system authenticates the user and if the username and password is correct, the user gets access to his account
5	Click Login	This user details are authenticated and if correct user is logged in
6	Click "Add Case" present on the navigation bar	The user is led to the page seeking the type of legal aid he requires i.e lawyer or police
7	Select "Go with lawyer"	This displays the list of available lawyers along with their associated details
8	Click Enter Case Details	Opens a new form where the case details, victim name and lawyer name is entered.

9	Click Submit"	The case details get updated in the database.
10	Click logout	The victim logs out of the system.
11	Click on Lawyer login	Opens the lawyer login page
12	Enter username and password of the lawyer to whom the victim applied to	The username and password is authenticated by the system
13	Click on View Cases	This displays all the cases which have been placed with this lawyer

Cases		
Victim name	Lawyer name	Case details
wert	erty	kidnap

#### Manual Testing

Test case id	STS 8
Test name	Place case with police
Description	Displays list of police stations along with other details associated with the lawyers. Following, this the victim can choose the police station and lodge a FIR with them. The person in charge at the police station can then see the cases when he logs in with his account.
Test environment	Google Chrome
Test strategy	Interface testing, Black box testing

Manual test procedure		
Steps	Description	Expected Results
1	Open the application in the browser.	The application is displayed correctly
2	Click on user login	Opens up the next which shows three types of user logins
3	Click on victim login	Opens up the next page which asks for the victim username and password, and also displays signup option if user doesn't have an account.
4	Enter the username and password	The system authenticates the user and and if the username and password is correct, the user gets access to his account
5	Click Login	This user details are authenticated and if correct user is logged in
6	Click "Add Case" present on the navigation bar	The user is led to the page seeking the type of legal aid he requires i.e lawyer or police
7	Select "Go with policer"	This displays the list of available police stations along with their associated details
8	Click Enter Case Details	Opens a new form where the case details, victim name and police name is entered.
9	Click Submit"	The case details get updated in the database.
10	Click logout	The victim logs out of the system.
11	Click on Police login	Opens the police login page
12	Enter username and password of the lawyer to whom the victim applied to	The username and password is authenticated by the system
13	Click on View Cases	This displays all the cases which have been placed with this police

Cases		
Victim name	Police station	Case details
wert	rtyu	robbery

#### Manual Testing

Test case id	STS 9
Test name	View Cases - Victim
Description	Displays the list of cases associated with the logged in user
Test environment	Google Chrome
Test strategy	Interface testing, Black box testing

Manual test procedure		
Steps	Description	Expected Results
1	Open the application in the browser.	The application is displayed correctly
2	Click on user login	Opens up the next which shows three types of user logins
3	Click on victim login	Opens up the next page which asks for the victim username and password, and also displays signup option if user doesn't have an account.
4	Enter the username and password	The system authenticates the user and and if the username and password is correct, the user gets access to his account
5	Click Login	This user details are authenticated and if correct user is logged in
6	Click "View Case" present on the navigation bar	The user is shown a table mentioning the cases, and its associated details. in which he is involved

#### Manual Testing

Test case id	STS 10
Test name	View Cases - Lawyer
Description	Displays the list of cases associated with the logged in user
Test environment	Google Chrome
Test strategy	Interface testing, Black box testing

The View case for lawyer gets tested under STS 7

#### Manual Testing

Test case id	STS 11
Test name	View Cases - Police
Description	Displays the list of cases associated with the logged in user
Test environment	Google Chrome
Test strategy	Interface testing, Black box testing

The View case for police gets tested under STS 8

## 4.2 Unit testing:

### 4.2.1 Unit testing of models

Models are tested using unit test to check whether the field which we mentioned in models are matched or not, and screenshots of results are added.

#### 1.Victim Model:



```

C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>python manage.py test page.tests.VictimTestCase
#####
Running for Victim model
#####

Creating test database for alias 'default'...
System check identified no issues (0 silenced).
Victim object created successfully
.checking for address
matched
.checking for email
matched
.checking for first name
matched
.checking for last name
matched
.
-----
Ran 5 tests in 0.010s

OK
Destroying test database for alias 'default'...
C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>

```

## 2. Police Model:

```

C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>python manage.py test page.tests.PoliceTestCase
#####
Running for Police model
#####

Creating test database for alias 'default'...
System check identified no issues (0 silenced).
Police object created successfully
.checking for address
matched
.checking for email
matched
.checking for first name
matched
.checking for last name
matched
.checking for phone no.
matched
.
-----
Ran 6 tests in 0.016s

OK
Destroying test database for alias 'default'...
C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>

```

## 3. Lawyer Model:

```

C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>python manage.py test page.tests.LawyerTestCase
#####
Running for Lawyer model
#####

Creating test database for alias 'default'...
System check identified no issues (0 silenced).
Lawyer object created successfully
.checking for address
matched
.checking for email
matched
.checking for first name
matched
.checking for last name
matched
.checking for phone no.
matched
.
-----
Ran 6 tests in 0.004s

OK
Destroying test database for alias 'default'...
C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>

```

## 4.2.2 Unit testing of forms

Forms are tested using unit test to check whether the field in forms and submit button url is working or not and screenshots of results are added.

### 1.Victim SignUp Form

```

C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>python manage.py test page.tests.VictimSignUpForm
#####
checking for Victim signup form
#####

Creating test database for alias 'default'...
System check identified no issues (0 silenced).
address field is working
.email field is working
.phone field is working
.password field is working
.username field is working
.form submit url is working
.
-----
Ran 6 tests in 0.016s

OK
Destroying test database for alias 'default'...
C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>

```

### 2.Lawyer Signup Form

```

C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>python manage.py test page.tests.LawyerSignUpForm
#####
checking for Lawyer signup form
#####

Creating test database for alias 'default'...
System check identified no issues (0 silenced).
.address field is working
.email field is working
.fees filed is working
.phone field is working
.previous case field is working
.password field is working
.username field is working
.form submit url is working
.
-----
Ran 8 tests in 0.016s

OK
Destroying test database for alias 'default'...
C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>

```

### 3. Police Signup Form

```

C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>python manage.py test page.tests.PoliceSignUpForm
#####
checking for Lawyer signup form
#####

Creating test database for alias 'default'...
System check identified no issues (0 silenced).
.address field is working
.email field is working
.phone field is working
.cases registered field is working
.password field is working
.username field is working
.form submit url is working
.
-----
Ran 7 tests in 0.011s

OK
Destroying test database for alias 'default'...
C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>

```

### 4. User Login Form

```
C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>python manage.py test page.tests.UserLoginForm
#####
checking for userlogin form
#####

Creating test database for alias 'default'...
System check identified no issues (0 silenced).
password field is working
.username field is working
.form submit url is working
.
-----
Ran 3 tests in 0.007s

OK
Destroying test database for alias 'default'...
C:\Users\Hardik Rana\Desktop\django\ojs_final\ojs>
```