Judiciary Information System (JIS)

SOFTWARE REQUIREMENTS SPECIFICATION

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Problem Statement

Judiciary Information System (JIS)

The attorney general's office has requested us to develop a Judiciary Information System (JIS), to help handle court cases and also to make the past court cases easily accessible to the lawyers and judges. For each court case, the name of the defendant, defendant's address, the crime type (e.g., theft, arson, etc.), when committed (date), where committed (location), name of the arresting officer, and the date of the arrest are entered by the court registrar. Each court case is identified by a unique case identification number (CIN) which is generated by the computer. The registrar assigns a date of hearing for each case. For this the registrar expects the computer to display the vacant slots on any working day during which the case can be scheduled. Each time a case is adjourned, the reason for adjournment is entered by the registrar and he assigns a new hearing date. If hearing takes place on any day for a case, the registrar enters the summary of the court proceedings and assigns a new hearing date. Also, on completion of a court case, the summary of the judgment is recorded and the case is closed but the details of the case is maintained for future reference. Other data maintained about a case include the name of the presiding judge, the public prosecutor, the starting date, and the expected completion date of a trial. The judges should be able to browse through the old cases for guidance on their judgment. The lawyers should also be permitted to browse old cases, but should be charged for each old case they browse. Using the JIS software, the Registrar of the court should be able to query the following:

(a) The currently pending court cases. In response to this query, the computer should print out the pending cases sorted by CIN. For each pending case, the following data should be listed: the date in which the case started, the defendant's name, address, crime details, the lawyer's name, the public prosecutor's name, and the attending judge's name.

(b) The cases that have been resolved over any given period. The output in this case should chronologically list the starting date of the case, the CIN, the date on which the judgment was delivered, the name of the attending judge, and the judgment summary.

(c) The cases that are coming up for hearing on a particular date.

(d) The status of any particular case (cases are identified by CIN). The lawyers and the judges need to refer to the past court cases. The lawyers need to refer these to prepare for their line of arguments. The judges need to refer the past court cases to examine the lines of judgments given previously to similar cases. It should be possible to search for the history of past court cases by entering key words. However, the lawyers should be charged for each time they see the details of a court case to recover some of the computerization costs. For this purpose, it is necessary to provide separate login accounts to the JIS software and keep track of how many court cases each lawyer views. The registrar should be able to create login accounts for the different users (i.e. judges, lawyers, etc) and should be able to delete these accounts.

1.0. Introduction

1.1. Purpose

The purpose of this document is to present a detailed description of the Judiciary Information System. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for the Registrar of the court and the developers of the system.

1.2. Scope

This software will be designed to provide a helping hand for the judges as well as the lawyers of the court by providing tools to help handle court cases which would otherwise have to be performed manually.

- This system will make the past court cases easily accessible to the lawyers and judges.
- The judges would be able to browse through the old cases for guidance on their judgement and examining the lines of judgement given previously to similar cases.
- It would be possible to search for the history of past court cases by entering key words.
- The lawyers would be permitted to browse old cases, but would be charged for each old case they browse.
- For the purpose of maintaining the charge for lawyers, separate login accounts are created for the lawyers and the judges which are maintained by the Registrar of the court.
- This system will allow the Registrar to see the details of the currently pending cases and the cases which have been resolved or the status of any particular case.

1.3. References

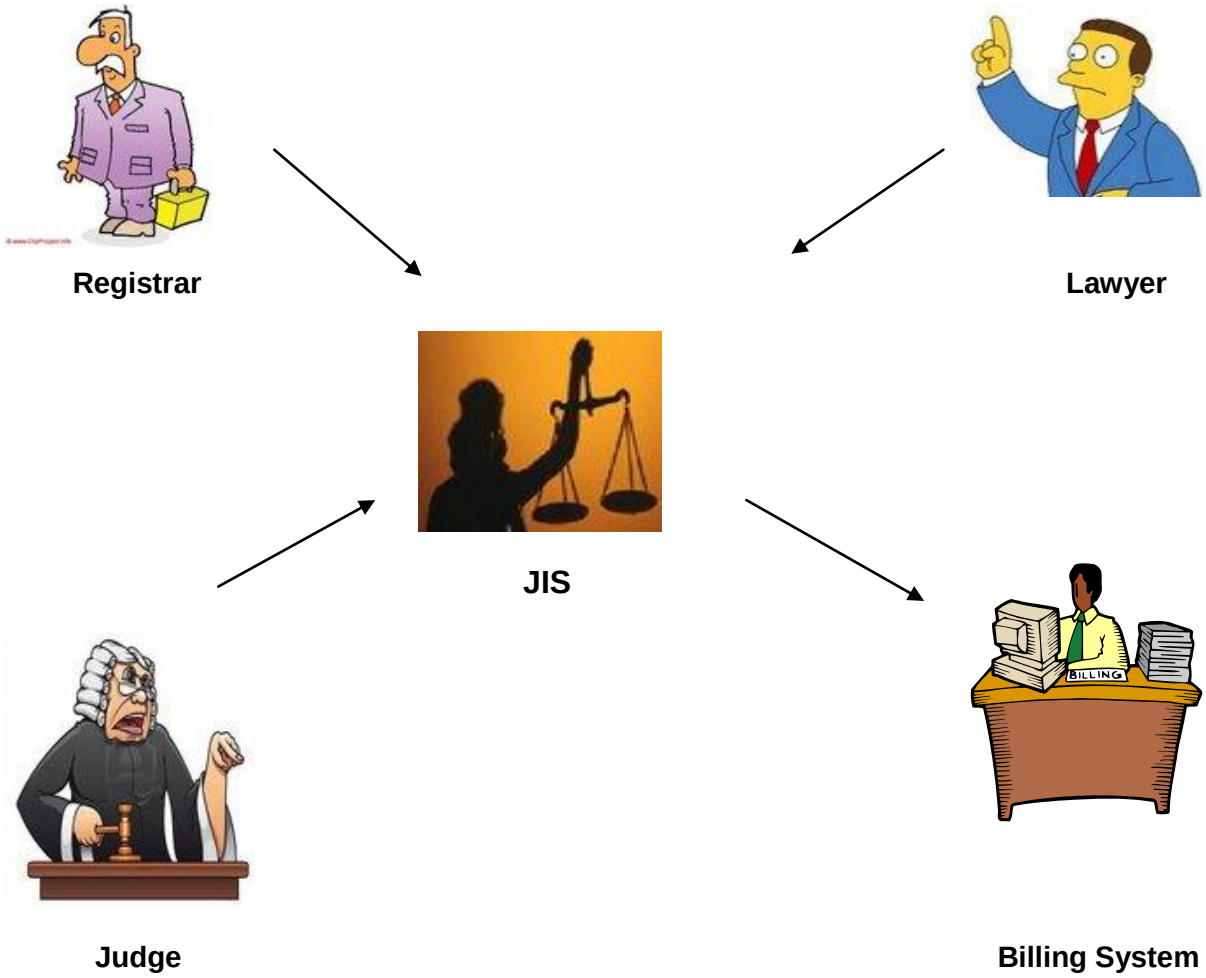
- IEEE : *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.

2.0. Overall Description

2.1. Product Perspective

The Judiciary Information System is a package to be used by the judges and the lawyers to improve the efficiency in handling court cases. The system provides information related to the cases which have been resolved so that judges can get guidance on their judgement and the lawyers can get guidance on their cases. This system is the first of its kind and replaces the old system of browsing through physical documents and papers thus reducing the maintenance burden.

The complete overview of the system is as shown in the overview diagram below:



Overview of the Proposed System

2.2. Product Features

The Judiciary Information System provides help to handle court cases and also to make the past court cases easily accessible to the lawyers and judges. The functions of the system include the system providing different type of services based on the type of users [Registrar/Judge/Lawyer].

- The judges would be able to browse through the old cases for guidance on their judgement and examining the lines of judgement given previously to similar cases.
- The lawyers would be permitted to browse old cases, but would be charged for each old case they browse.
- This system allows to search for history of past cases by entering key words.
- The registrar can assign a date of hearing for each case by the help of the computer which displays the vacant slots on any working day.
- The registrar can get the information about the currently pending cases, the cases which have been resolved, the cases that are coming up for hearing on a particular day and the status of any particular case.
- The registrar is provided with the interface to add/delete the accounts of judges/lawyers.

- The lawyers when complete the past case browsing process, the amount to be paid by them are calculated and the information about the lawyer and the amount is sent to the billing system.

2.3. User Classes and Characteristics

The users of Judiciary Information System are the Registrar, the judges, the lawyers and the administrators who maintain the system.

The users are assumed to have basic knowledge of the computers, internet and the system. The administrators of the system should have more knowledge of the internals of the system and should be able to rectify the small problems that may arise due to disk crashes, power failures and other catastrophes to the system.

2.4. Operating Environment

- The internet connection should be available 24 hours a day for the server to run.
- This software is platform independent i.e it runs on every operating system (Windows/Linux/Mac).
- The system using this software should have Java SE 6 installed.
- The system running this software should have minimum 128 MB RAM for Windows and 64 MB RAM for Linux.

2.5. Design and Implementation Constraints

- The information of all the past cases must be stored in a database that is accessible by the Judiciary Information System.
- The billing system is connected to the Judiciary Information System (JIS) and the database used by the billing system must be compatible with the interfaces of the JIS.
- The users must have their correct usernames and passwords to enter the JIS.
- The files in which the information regarding the previous cases are stored should be secured against malicious deformations.

2.6. User Documentation

The proper user interfaces, user's manual, online help and the guide to installation and maintenance of the system must be sufficient to educate the users on how to use the system without any problems.

2.7. Assumptions and Dependencies

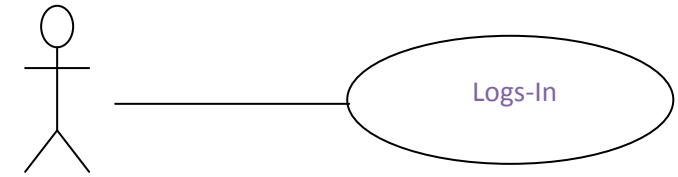
- Full working of JIS is dependent on availability of an internet connection.
- The users have sufficient knowledge of computers and internet.
- The users know English language as the user interface will be provided in English.
- The system can access the previous cases database.

3.0. Functional Requirements

This section outlines the use cases for each of the active readers separately. The registrar is the main actor in this system.

3.1. Use Case 1: Registrar Logs-In the Software

Diagram:



Brief Description:

The Registrar logs in the system and inputs the details of the case.

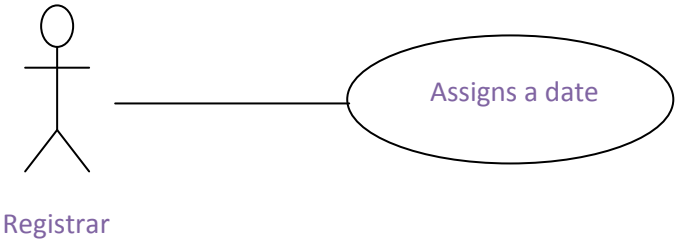
Input: The Registrar logs into the system by selecting the *Registrar Log-In* option. The defendant's name, defendant's address, crime type, date of crime, place of crime, name of arresting officer and the date of arrest for each case are entered by selecting the *Input Case Details* option.

Processing: The system opens the file which stores the log-in details of the users and matches it against the input.

Output: The computer automatically generates a unique case identification number (CIN) for each case.

3.2. Use Case 2: Date of Hearing

Diagram:



Brief Description:

After the unique CIN is generated, the Registrar assigns a date of hearing for the case.

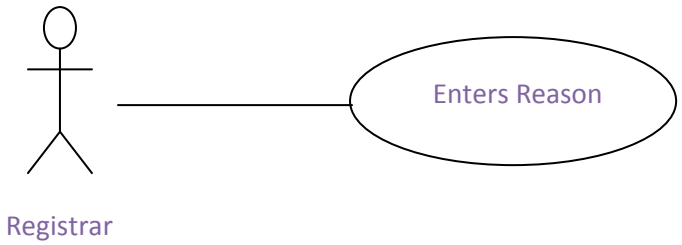
Input: The Registrar selects the *Display Dates* option.

Processing: The system opens the file which stores the dates and checks if they are occupied or not and prints the non-occupied dates.

Output: The computer displays the vacant slots on any working day during which the case can be scheduled.

3.3. Use Case 3: Reason of Adjournment

Diagram:



Brief Description:

Reason of adjournment is entered if any case is adjourned.

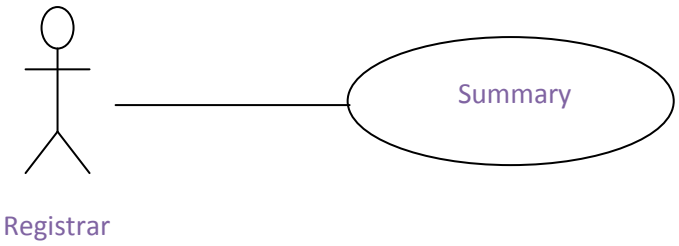
Input: The Registrar enters the reason due to which the case was adjourned by selecting *Enter Summary* option and selects the *Display Dates* option.

Processing: The system opens the file which stores the case details and the Registrar writes the reason into that file and closes it.

Output: A new hearing date is assigned for that case.

3.4. Use Case 4: Summary of Court Proceedings

Diagram:



Brief Description:

If hearing of a case takes place, the summary of the court proceedings are entered, the judgement is recorded and the case is closed but the details of the case are maintained for future reference.

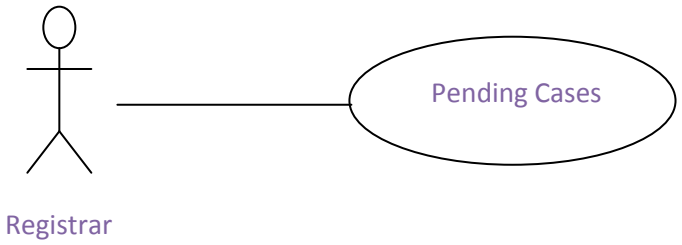
Input: The Registrar enters the summary of the case by selecting *Enter Summary* option and selects the *Display Dates* option for new hearing date.

Processing: The system opens the file which stores the case details and the Registrar writes the summary into that file and closes it.

Output: A new hearing date is assigned for the case.

3.5. Use Case 5: Currently Pending Court Cases

Diagram:



Brief Description:

This function gives the details of the currently pending cases when queried by the Registrar.

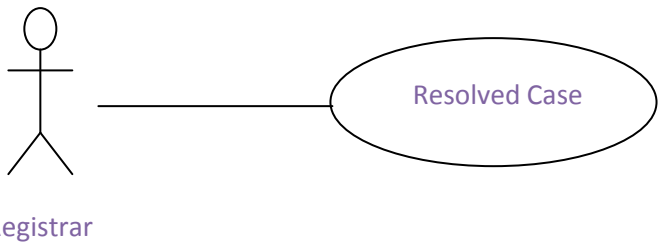
Input: The Registrar queries about the pending cases by selecting the *Pending Cases* option.

Processing: The system opens the file which stores the pending cases details and the Registrar reads from that file and closes it.

Output: The computer prints out the pending cases sorted by their CIN. For each pending case, the following data are listed: the date in which the case started, the defendant's name, address, crime details, the lawyer's name, the public prosecutor's name and the attending judge's name.

3.6. Use Case 6: Resolved Cases

Diagram:



Brief Description:

This function displays the details of the resolved cases over any given period.

Input: The Registrar queries about the resolved cases by selecting the *Resolved Cases* option.

Processing: The system opens the file which stores the resolved cases details and the Registrar reads from that file and closes it.

Output: The computer chronologically lists the starting date of the case, the CIN, the date on which the judgement was delivered, the name of the attending judge and the judgement summary.

3.7. Use Case 7: Cases on a particular date

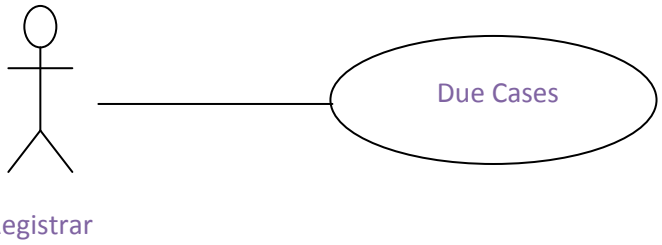


Diagram:

Brief Description:

This function lists the cases due on a particular date.

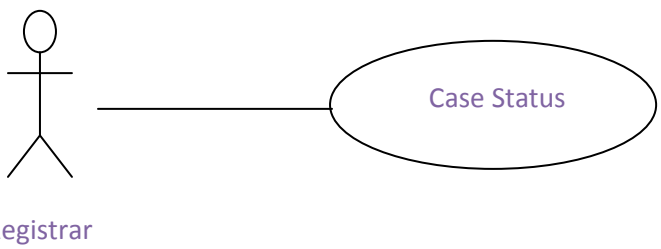
Input: The Registrar selects the *Due Cases* option and enters the date of hearing.

Processing: The system opens the file which stores the due cases details and the Registrar reads from that file and closes it.

Output: All the cases that are scheduled on that day are listed in the form of their CIN.

3.8. Use Case 8: Case Status

Diagram:



Brief Description:

This function displays the status (Pending/Closed/Due) of any particular case queried by the Registrar.

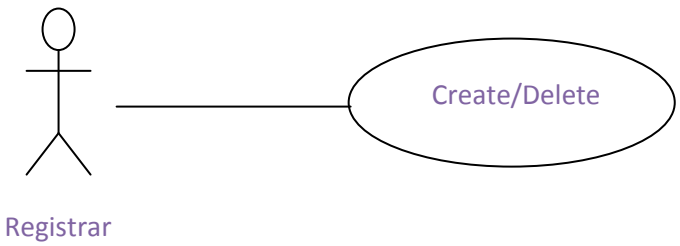
Input: The Registrar selects the *Case Status* option and enters the CIN of the case he is interested in.

Processing: The system opens the file which stores the cases details and the Registrar reads the summary from that file and closes it.

Output: The computer displays the status of the particular case.

3.9. Use Case 9: Create/Delete Accounts

Diagram:



Brief Description:

This function allows the Registrar to create or delete judges/lawyers accounts.

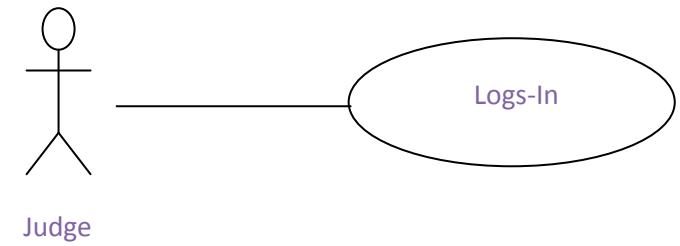
Input: The Registrar creates accounts by selecting the *Create New Account* option and entering the name of the judge/lawyer. He deletes an account by selecting the *Delete Account* option and entering the name of the judge/lawyer.

Processing: The system opens the file which stores the log-in details of the users and creates/deletes the corresponding user's details.

Output: A username and password is created for every account created and deleted for every account deleted.

3.10. Use Case 10: Judges Log-In

Diagram:



Brief Description:

This function allows the judges to log into the JIS and browse through the previous case history to get guidance on their decisions.

Input: The judges log into the system by selection the *Judges Log-In* option and can select the previous cases by selecting the *Resolved Cases* option and entering key words like their CIN.

Processing: The system opens the file which stores the log-in details of the users and matches it against the input.

Output: The case details of the particular case are displayed.

3.11. Use Case 11: Lawyers Log-In

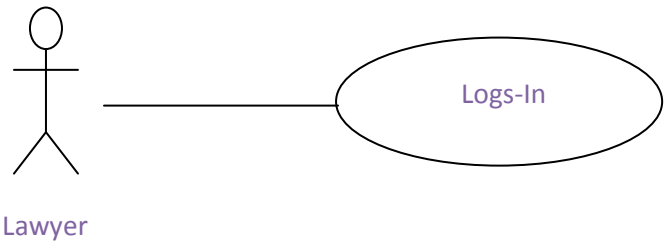


Diagram:

Brief Description:

This function allows the lawyers to log into the JIS and browse through the previous case history to get guidance on similar cases.

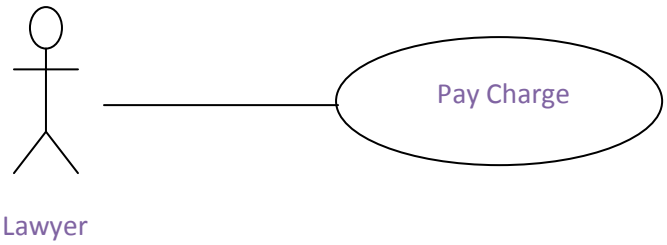
Input: The lawyers log into the system by selection the *Lawyers Log-In* option and can select the previous cases by selecting *Resolved Cases* option and entering key words like their CIN.

Processing: The system opens the file which stores the log-in details of the users and matches it against the input.

Output: The case details of the particular case are displayed. Also, the number of previous cases views for each lawyer is displayed.

3.12. Use Case 12: Pay Charge

Diagram:



Brief Description:

This function allows the lawyers to clear their dues for viewing previous court cases.

Input: The lawyers can pay for their charges by logging into JIS and selecting *Pay Charges*.

Processing: The system opens the file which stores the amount details of the lawyers and resets the amount to NIL of the corresponding lawyer.

Output: This connects the JIS to the Billing System which generates the printed bill and resets the charges to NIL for the lawyer.

4.0. External Interface Requirements

4.1. User Interfaces

The user interface is basically divided into three main sections: the interface related to the Registrar, the judge and the lawyer and are as follows:

- ***Registrar***

    1. **Registrar Log-In:** This button is placed on the home page of the software. The Registrar logs into the system by entering his user name and password. If the Registrar enters the wrong username or password, an error message pops up describing the error.

    2. **Input Case Details**: Once the Registrar logs into the system, he can enter all the case details by selecting this button. The Registrar finishes entering the details by selecting the *Done* option.

    3. **Display Dates:** After entering the details of the case, the Registrar selects this button to ask the computer to display the vacant slots on any working day during which the case can be scheduled. If no dates are available, a message regarding the same pops up.

    4. **Enter Summary:** After the Registrar logs into the system, he can enter the summary of the case by selecting this button and entering its summary.

5. **Pending Cases:** This button appears after the Registrar logs into the system. He selects this button to see the details of the pending cases by entering their CIN.

6. **Resolved Cases:** This button appears after the Registrar logs into the system. He selects this button to see the details of the resolved cases by entering their CIN.

7. **Due Cases:** This button appears after the Registrar logs into the system. He selects this button to see which cases are scheduled on a particular date by entering the date.

8. **Case Status:** This button appears after the Registrar logs into the system. He selects this button to see the status of the cases (Pending/Closed/Due) by entering their CIN.

9. **Create New Account:** After the Registrar logs into the system, he can create a new account for judges or lawyers by selecting this button. On selecting this button, the Registrar has to choose whether he wants to create a new judge account or a new lawyer account.

10. **Delete Account:** After the Registrar logs into the system, he can delete an existing account of a judge or a lawyer by selecting this button. On selecting this button, the Registrar has to choose whether he wants to delete a judge account or a lawyer account.

11. **Log-Out:** This button appears once the Registrar logs into the system. On selecting this button, the Registrar logs out of the system and the home page of the software is displayed.

- ***Judge***

1. **Judges Log-In:** This button is placed on the home page of the software. The Judge logs into the system by entering his/her user name and password. If the judge enters the wrong username or password, an error message will pop up describing the error. Also, if his/her account does not exists, then an error message pops up regarding the same.

2. **Resolved Cases:** This button appears after the judge logs into the system. He/She selects this button to see the details of the resolved cases by entering their CIN.

3. **Log-Out:** This button appears once the judge logs into the system. On selecting this button, the judge logs out of the system and the home page of the software is displayed.

- ***Lawyer***

    1. **Lawyers Log-In:** This button is placed on the home page of the software. The Lawyer logs into the system by entering his/her user name and password. If the lawyer enters the wrong username or password, an error message will pop up describing the error. Also, if his/her account does not exists, then an error message pops up regarding the same.

    2. **Resolved Cases:** This button appears after the judge logs into the system. He/She selects this button to see the details of the resolved cases by entering their CIN.

    3. **Pay Charges:** After the lawyer logs into the system, he/she can pay for the charges by selecting this button. After this, he/she will be redirected to the Billing System where he/she can pay for the dues.

    4. **Log-Out:** This button appears once the lawyer logs into the system. On selecting this button, the lawyer logs out of the system and the home page of the software is displayed.

4.2. *Software Interfaces*

- The Judiciary Information System connects to the database through JDBC. It opens the file which is required to perform a certain function.
- The Judiciary Information System connects directly to the JVM and hence is platform independent and therefore runs on every operating system.
- A firewall will be used with the server to prevent unauthorized access to the system.

5.0. Other Requirements

5.1 Attributes

- **Portability**: Universally available operating systems such as Windows, Linux, etc should be used to make this software portable. This software is capable to adapting to different specified environments.
- **Maintainability**: The tutorials and user's manuals provided should be thoroughly read to efficiently maintain the software. This software is capable of modifying for purpose of making corrections, improvements and adaptation.
- **Performance**: Internet connection should be available 24 hours a day for excellent performance. Performance is optimum as requirements for the given software is minimum.

5.2 Database

- Certain files are required to maintain the details of the court cases for present and future use by the judges and the lawyers.

5.3 Hardware

- A printer is required by the Billing System for giving a printed bill to the lawyers when they pay for their charges.
- A dedicated server in the Attorney General's office for functioning of the JIS.

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