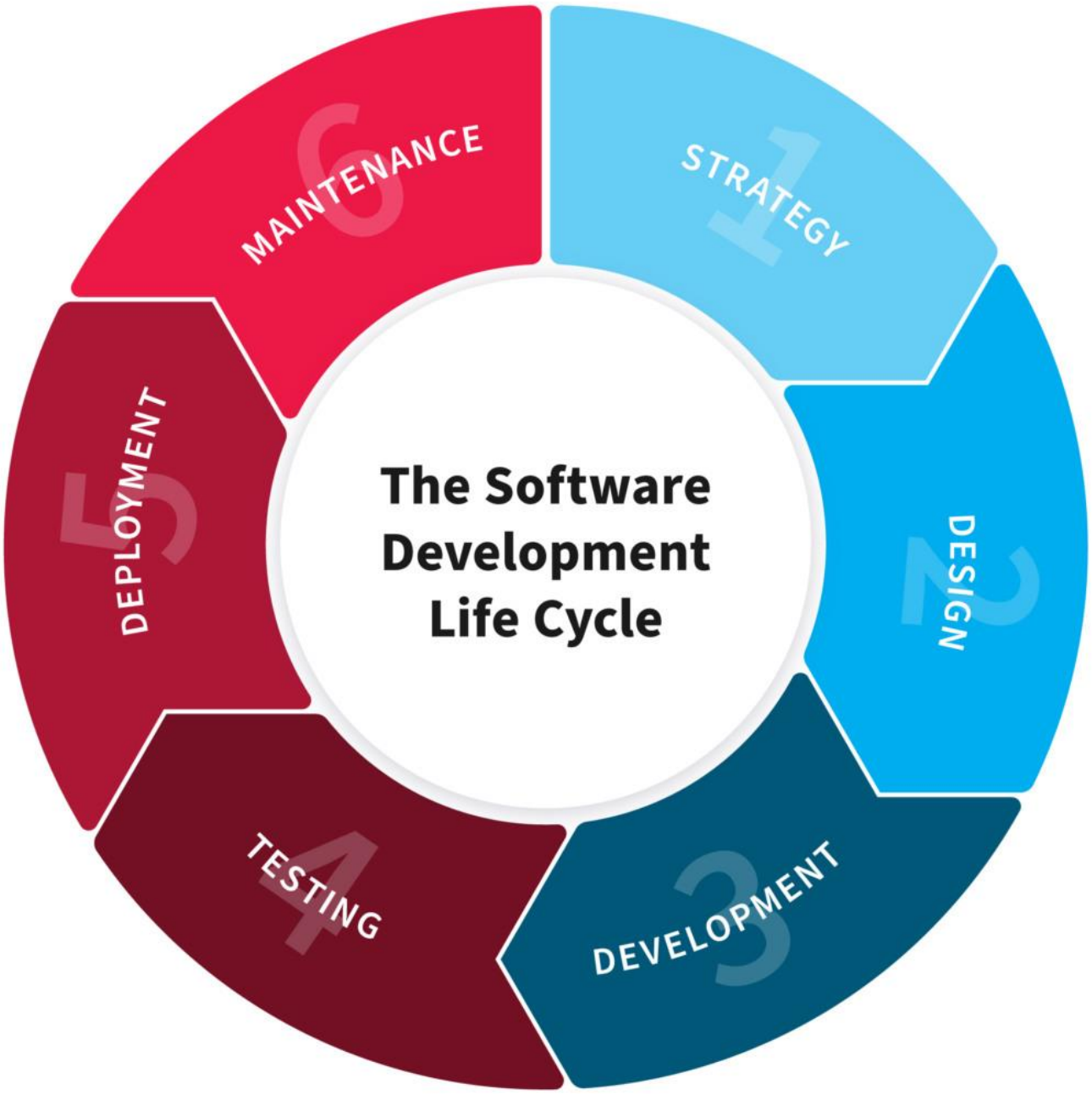
DOCUMENTATION OF ADVANCED JAVA PROGRAMMING PROJECT



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PROJECT NAME: SMART PHARMACY SYSTEM

1. PLANNING

Smart pharmacy system is an application designed to link the Pharmacists and patients so that they could get in touch easily by reducing costly trips and time a patient used to spend looking for his/her medications. this pharmacy system will be achieving patient satisfaction through the process of dispensing and distributing medicines through an integrated health system and it helps in improving the pharmacists access to the right medicine in no time in a way that ensures that patients receive medicines in a timely manner, while providing greater drug safety and reducing medication errors

Here are the main objectives of smart pharmacy system

- Saves time either for the pharmacist or patient in the way of providing and receiving medications
- Easy way of linking the pharmacists and patients
- Manages medicine inventory

Solutions of smart pharmacy system

- Outdated medicines across database
- Poor storage of data
- Analog search of medications

2. DESIGN

2.1 Functional requirements

- Facilitate communication between pharmacists and patients.
- This system will allow users to view and search available medications.
- This system will allow users to leave a comment on the medication through smart assistance
- This system will allow users to access the interface, which shows the address information of our pharmacy location.

2.2 non-functional requirements

- Usability
- Efficiency
- Security

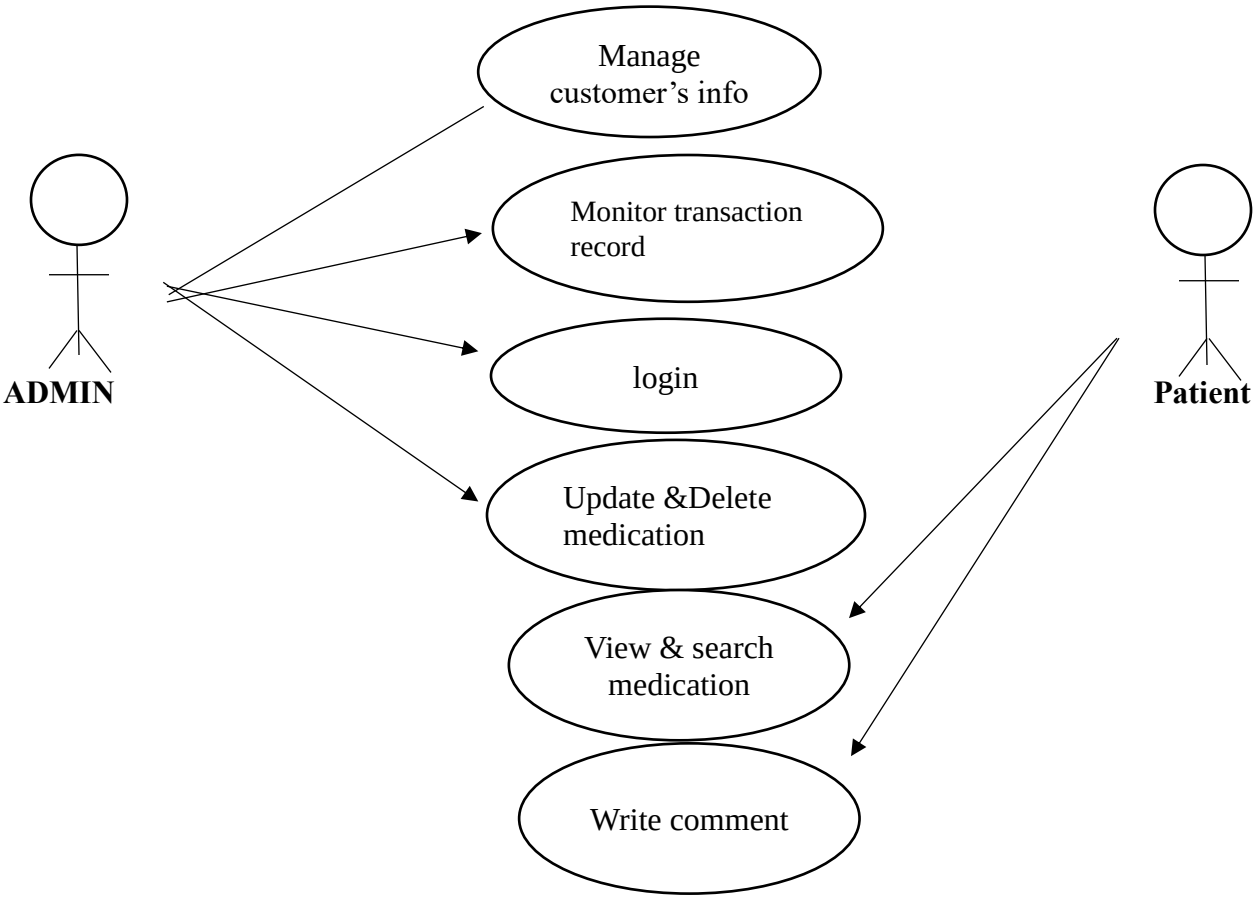
- Reliability
- Performance
- Availability

DFD Diagram

Level 0.

In this data flow diagram, this will serve as a guide as you go through the deeper processes of understanding how this system actually works.

USERCASE DIAGRAM



3. DEVELOPMENT

Front-end technology is the part of website that the user interacts with directly website interfaces

Front –end –Frameworks and libraries

- We used jcalender 1.4 as a library for java date chooser for graphically picking a date.
- We developed the system backend and frontend parts using java programming language as well as NetBeans IDE and xampp server for database.
- For frontend parts, we used swing controls generated from NetBeans to create forms, buttons, labels as well as user interface as whole.
- We create interactions between user interface components such as forms and buttons using java programming language syntaxes.
- We used com.mysql.jdbc_5.1.5.jar as library handling MYSQL connection with the system and absolute layout.jar.

Back –end is server side of the website it stores and arranges data and makes sure if everything on client side of website works well. Here we used jsp and servlet technologies to perform activities by working with system components without user-interface such as CRUD operations (create, read, update, delete).

- We used MySQL as database management system to hold backend data.

4. TESTING

System testing is testing conducted on a complete integrated system to evaluate the system's compliance with its specified requirements.

Open xampp server
Start Apache and mysql
Open project in netbeans
Add Jcalender jarfolder in the libraries
Add com.mysql.jdbc_5.1.5.jar in the Libraries.

PHARMACIST INTERACTION

Run the Pharmacist login page by right click RUN or shift key+6.
Enter credentials of the pharmacist
Ensure that you fill in the username and the password that matches with the fields in the database.
Then after filling, receive a popup message that welcomes the pharmacist otherwise it will display the message that will inform you that the password and username entered is incorrect.

After Pharmacist logging in successfully will navigate to the following main menu as follows: MEDICATION and SMART ASSISTANCE

For medication Tab

DATA INSERTION

A pharmacist will have the responsibility of adding medications and receive a popup message that tells him that it was inserted in the database successfully and he will confirm it by checking on the right corner of the table that it was
added on the medications available.

DATA UPDATE and DELETE

A pharmacist will also have a privilege of managing the inventory by deleting or updating medications where incase the medication is misspelled you can update it and receive a message that popups and confirms that you have updated the medication successfully and this also works on delete button where incase he deletes a certain medication will get a popup message that tells him that he successfully deleted the medication.

For SMART Assistance Tab

The pharmacist will visit the smart assistance tab to view the comments of the patients have asked and give them the feedback via a phone call or email.

He will also have the option of deleting the comment, which was replied or lasted for a long period answered.

PATIENT INTERACTION

When the patient run this system, he/she will be welcomed by the homepage with 3 menu such as:

- MEDICATIONS
- CONTACT US
- SMART HELP

For medications tab

The time a patient visit, this tab he will be able to search for the available medications and check if the particular medication he is looking for is available.

For SMART HELP

Thereafter, when the patient found his desired medication or want some further information on a certain type of medication and on how he will take it or receive it and leave a comment and wait for a feedback from the pharmacist.

5. DEPLOYMENT

- I Installed MYSQL as database management system using XAMPP software.
- Downloaded and configured com.mysql.jdbc_5.1.5.jar as library handling MYSQL connection.
- Downloaded and configure Jcalender 1.4.jar as library for date choosing.
- Downloaded rs2xml.jar as library for displaying data from database.
- Use portable storage device to transfer project from development computer to the user who want to explore application.
- I tested my Smart pharmacy System by entering wrong data to see if it will not work and by entering right data to see if it will work well.

After testing it, I Run project file and start using the system