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SMART HEALTH CONSULTING

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Application has been done using Android as front -end tool and SQLite to store data. This project is simple and easy to handle. This software provides easy retrieval and fast data storage. It streamlines and reduces the user workload throughout the process. This application contains an administration module in which the administrator can register the new diseases and their symptoms. Then the administrator can specify which doctor is available to treat the specified diseases. It also includes the medicine that cures the disease. The administrator can also give the hospital details in which the doctors work and treatments available for the specified disease. separate login for the doctor is available for the registered doctors. In doctor login, the particular doctor can view his information and can edit the information such as name, address, and mobile number which is already registered. Then the end user can register in the application and can log in to the system. Users have the option to edit the information and a search disease option. In the search option, the user needs to give the symptoms of the disease and on pressing the search disease button, the system displays a list of diseases for the given symptom, and the medicine and hospital and the particular doctor available to treat the disease. A separate option to search for the doctor is available into which the user needs to enter the doctor's name and the application lists out the address, mobile, and the specialization of the doctor. This application is user-friendly and well-suited for mobile applications. I assume that the developed project gives the best support and gives a lot of help to the public in finding the disease.

I. INTRODUCTION

Android is a software stack for mobile devices that includes the operating system, middleware, and essential applications. Google Inc. purchased the first software engineer, Android Inc., in 2005. Google and other members of the Open Handset Alliance are collaborating on the development and release of Android. The Android Open Source Project (AOSP) has been given the task of repairing and upgrading Android further. The Android SDK provides the tools and APIs needed to start developing Android platform applications using the Java programming language. Android has a large community of developers who write applications ("applications") that extend the functionality of devices. There are currently over 250,000 Android apps available.

- An app framework that allows for reuse and replacement of parts
- Dalvik visual device designed for mobile devices
- Integrated browser-based open source WebKit engine
- Enhanced images enabled custom 2D picture library; 3D graphics based on OpenGL ES 1.0 (optional acceleration hardware)
- SQLite structured data storage
- Support media for standard audio, video, and still image formats (MPEG4, H.264, MP3, AAC, AMR, JPG, PNG, GIF)
- GSM Telephony (hardware dependent)
- A rich area of development that includes device template, debug tools, memory and profile performance, and the Eclipse IDE plugin
- Android includes a set of C / C ++ libraries used by various components of the Android system. These capabilities are developed by developers through the Android application framework.
- System C library - BSD-based use of the standard C (libs) system library, downloaded on Linux-based devices
- Surface Manager - controls access to the system below the display and easily integrates 2D and 3D image layers from multiple applications.

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- SGL - basic 2D image engine
- 3D libraries - applications based on OpenGL ES 1.0 APIs; Libraries using Hardware 3D acceleration (where available) or highly advanced 3D software rasterizer
- FreeType - bitmap and vector font
- SQLite - a powerful and simple related search engine available for all applications

The regulator can then determine which doctor is available to treat the specified diseases. It includes medicine to cure the disease. The administrator can also provide details of the hospital where the doctors work and the available treatment for the said disease. Alternative physician login is available from registered doctors. At the doctor's appointment, a doctor can view his or her personal information and may arrange for details such as name, address, and cell phone number already registered. After that, the end user can sign up for the program and can log into the system. Users have the option to edit the information and the search option. In the search, the user needs to provide the symptoms and then press the search button, the system displays a list of symptoms of the given symptoms, the medication, and hospital and a specific physician available to treat the disease. A different doctor search option is available when the user needs to enter a doctor's name and the application displays the address, cell phone, and medical expertise.

II. FUNCTIONAL ARCHITECTURE

Eclipse uses plug-ins to deliver all of its functionality over (and including) the operating system, unlike other applications where performance often has strict codes. The Eclipse operating system is based on Equinox, a standard compatible implementation of OSGi. This plug-in is a lightweight component of the software. In addition to allowing Eclipse to be extended using other programming languages such as C and Python, the plug-in framework allows Eclipse to work with programming languages such as LaTeX, [2] communication applications such as telnet, and programs website management. The architecture plug-in supports writing any desired extension to the environment, such as configuration management. Java and CVS support is provided in the Eclipse SDK, with the conversion support provided by third-party plug-ins. Except for the short-running kernel, everything in Eclipse is a plug-in. This means that all developed plug-ins integrate with Eclipse in the same way as other plug-ins; in this case, all the elements are "created equal". Eclipse offers plug-ins in a wide variety of features, some of which foreign companies use both free and commercial formats. Examples of plug-ins include UML plug-in Tracking and other UML graphics, DB Explorer plug-in, and many more. The Eclipse SDK integrates with Eclipse Java Development Tools (JDT), which provides an IDE with a built-in Java compiler and a complete version of Java source files. This allows for advanced redesign techniques and code analysis. IDE also uses the workspace, in this case, a set of metadata in the flat file area that allows the conversion of external files as long as the corresponding "app" workspace is updated later. Eclipse uses widgets with a Java widget toolkit called SWT, unlike most Java applications, which use Java standard Abstract Window Toolkit (AWT) or Swing. The Eclipse user interface also uses a central GUI layer called JFace, which simplifies SWT-based applications.

- Equinox OSGi - standard integration framework
- Main forum - launch Eclipse, use plug-ins
- Standard Widget Toolkit (SWT) - portable widget toolkit
- JFace - viewer classes to deliver SWT view control system model, file archives, text management, text editors
- Eclipse Workbench - views, editors, ideas, wizards.

Eclipse started as an IBM Canada project. It was developed by Object Technology International (OTI) as a Java-based way to represent the Smalltalk family based on Visual Age IDE products, [4] itself developed by OTI. [1]In November 2001, a consortium was established to promote the development of Eclipse as an open source.(released June 21, 2004) selected the OSGi Service Platform specification as a working time frame. [6] Eclipse was originally released under the Common Public License but was re-authorized under the Eclipse Public License. The Free Software Foundation stated that both licenses are free software licenses, but do not comply with the GNU General Public License (GPL). [7] Mike Milinkovich, of the Eclipse Foundation, noted that the move to the GPL will be considered when the 3rd edition of the GPL is released. [8] According to Lee Nackman, then Chief Technology Officer of IBM's Rational division and later head of Rational software

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development and support, the term "Eclipse" was chosen to direct Microsoft Visual Studio. product, not Sun Microsystems. [9] Surprisingly, Nackman is now a Microsoft employee.

The Eclipse Software Development Kit (SDK) is an integrated Java-based development platform (IDE) that covers a wide range of Eclipse projects including Platform, Java Development Tools (JDT), and a Plug-in Development Center. (PDE). Eclipse can be used to build a series of software applications using languages ranging from PHP and C ++ programs to Java. It is one of the most well-known development tools in both the open and commercial world. Provides Java configuration for authentication, growing integration, cross-referencing, code assistant; XML Editor; Mylyn; many more. Eclipse is issued under the Eclipse Foundation, a friendly commercial license that allows organizations to incorporate Eclipse software into their commercial products, while at the same time inviting those who are creating EPL code-based work to contribute to the public.

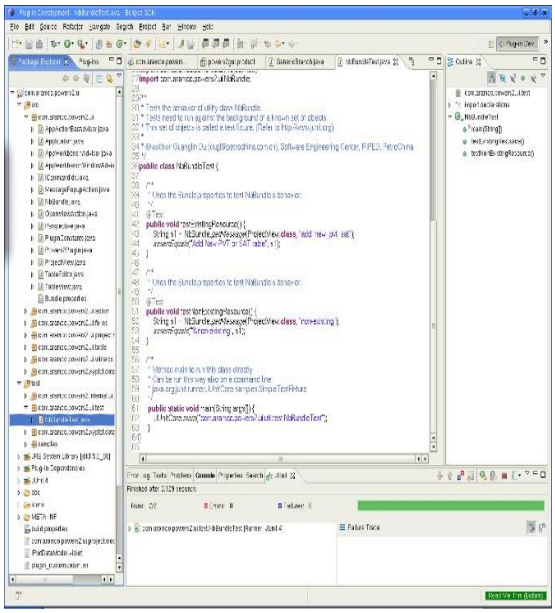

Figure 1: Eclipse-Plug In Development

The Eclipse Platform provides key frameworks and services where all plug-in extensions are implemented. It also provides an operating time where plug-ins are loaded, assembled, and used. The main purpose of the Platform is to empower other tool engineers to easily build and deliver integrated tools.

- Supports the development of various application development tools
- Supports an unlimited set of tool providers, including independent software vendors (ISVs)
- Supports reckless content type tools (e.g., HTML, Java, C, JSP, EJB, XML, and GIF)
- Provides seamless integration of tools within and between different content types and tool providers

The JDT project provides plug-in tools that use Java IDE to support the development of any Java application, including Eclipse plug-ins. Add a Java project environment and Java perspective to the Eclipse Workbench as well as some viewers, editors, wizards, builders, and coding and redesign tools. The JDT project allows Eclipse to become a place for self-development.

- Java projects with source files sorted by package directory
- Keyword editing and syntax color, a frame that reflects the layout of the announcement
- Code format
- Redo
- Search
- Compare
- Merge - Java compliant JCK compatible
- Run Java applications on a different Java target machine

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• Adjust programs with Java JPDA compliant machine

During the Android upgrade, it is very helpful to have an Android source code available as Android uses a lot of defaults. Haris Peco store plugins provide access to Android source code. Use the Eclipse update manager to install its two plugins. Android tools include emulators. This emulator behaves like a real Android device in most cases and allows you to test your app without having a real device. You can emulate one or more devices with different configurations. Each configuration is defined as an "Android Virtual Device" (AVD).

To define AVD press the Device Manager button, press "New" and save the following

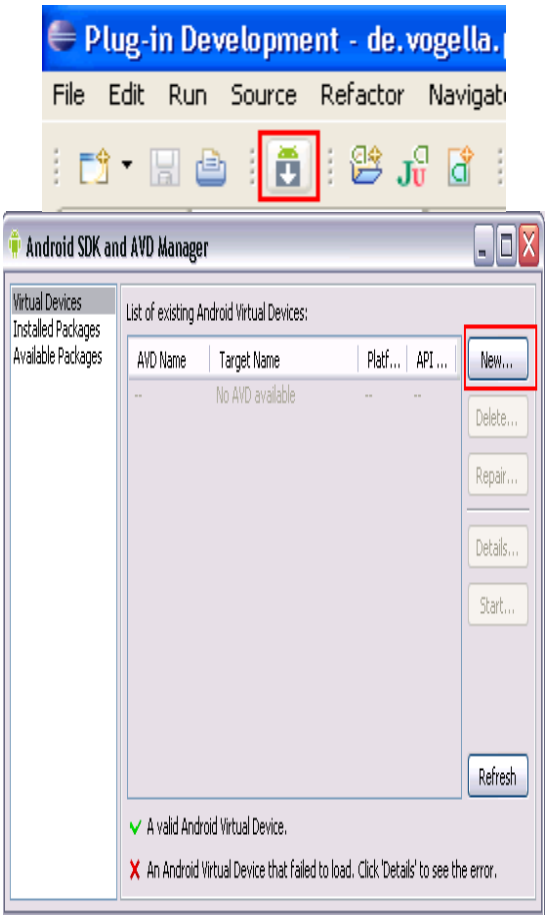

Figure 2: Android SDK and AVD manager

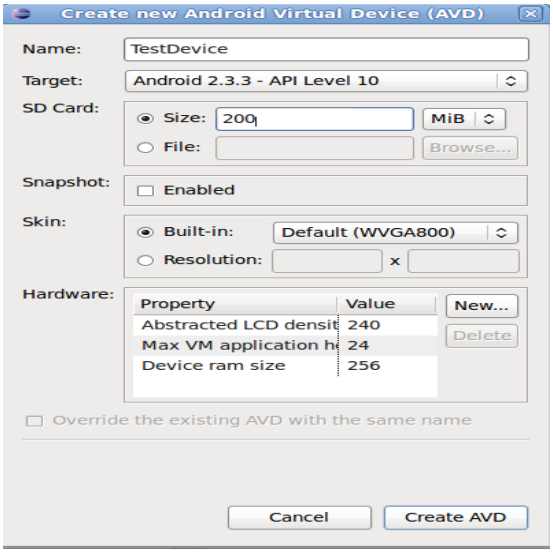

Figure 3: Android virtual device

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Press "Create AVD".This will create a device and display it under "Visible Devices". To check if your setup is correct, select your device and press "Start".

III. LITERATURE SURVEY

1. “Novel Framework for Smart Health Consulting Using Android Device ”

To overcome this problem with the android app suggestion, this smart health app allows users to get an instant report on their health issues with the smart online healthcare app. This E-health app allows user to express their symptoms and problems. It then analyzes user problems and symptoms to diagnose various health problems that may be associated with symptoms provided by users.

2. “Android-Based System for Determining a Special Hospital Near the Patient Area”

In this research project, an application is being made that places a hospital about five miles [5 km] away with the desired medical expertise. Nearby hospitals are calculated with the built-in Global Positioning System (GPS) feature on Smart phones and detects route from their current location via the Google Map Application Program Interface (API).

3. “Research Smart Healthcare Services:

Based on the APP Health Service Platform Design” In order to develop and direct intelligent health care services, an effective and appropriate app health service platform is urgently needed to help older and younger people. Based on the above, this paper outlines the health service system principles and final APP health information design. health service forum.

IV. WORKING AND IMPLEMENTATION

Implementation is the phase of the project in which the structure of the theater is turned into an application. It can therefore be considered the most critical stage in achieving a successful new system and in giving the user the confidence that the new system will work and work effectively. The implementation phase includes careful planning, an investigation of the existing system and issues in its implementation, the design of transformation strategies, and evaluation of change mechanisms.

Implementation is a stage in a project where the structure of the theory is transformed into an application. The most important stage is to achieve a successful system and to give hope to the new system for users, which will work well and effectively. The startup process begins with preparing the program to launch the program. According to the plan, activities must be done in these programs; Discussions have been made about goods, services, and how to evaluate jobs. The coding step translates data representation into a programmatic language fulfillment. Editing languages are the tools of communication between human and computer language features and the style of coding can greatly affect software quality and maintenance. Coding is done taking into account the following factors.

- Easy to design code translation.
- Code efficiency.
- Memory function.
- Security.

The user must be very careful when doing the project to ensure that what you have planned is done correctly. The user should not change the purpose of the project while using it. The user does not have to go around to get a solution; it should be straightforward, clear and concise, and reach a point.

Modules

Administrator module

Type of disease:

This is the main stage of the disease. Here the controller can give the type of disease a name like heart, general, etc.

New Disease:

Here the administrator can create a new disease name, type, and symptoms caused by the disease with a comma-separated text.

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New Doctor:

In this module, the administrator can create new doctors by providing information such as a doctor's name, specialist and address, cell phone, and login password.

New Hospital:

Admin can create a new hospital in the city by providing a hospital name, address, and phone number and can store information in a database.

New Medicine:

The formulation of a drug contains the name of the drug, the type, and the disease the drug is used for treatment.

Doctor Login

Edit Information:

Here the doctor can edit information such as name, address, and cell phone number and can store it on a website.

User login

Registration:

Users can sign up freely for this app. Users are required to provide their name, gender, age, city, mobile number, and password to log in. After providing the information the user id is created for the user.

Edit Information:

Users can edit registered data such as name, age, city, and mobile information and can store it on a website.

Search Disease:

The user needs to enter the brand name first and you need to press the search button. The application looks for symptoms and shows the name of the disease that may be the type of disease and the available treatment for the disease. It also lists the doctor's name and the doctor's contact number.

Search a Doctor:

Here the user can search for an available doctor. The user needs to provide the name of the doctor and the application calculates the type of disease the doctor is treating and the address and cell phone number of the doctor.

V. TESTING

System testing is an important phase in any life cycle of system development. Testing is the process of making a plan to find errors. The importance of software testing and its implications for software quality cannot be overemphasized. Software testing is an important aspect of software quality assurance and represents the final review of specifications, formats, and coding. A good test case has a higher chance of finding an undisclosed error.

The purpose of the test is to find errors. Testing is the process of trying to identify every possible flaw or weakness in the product. Provides a way to evaluate the performance of components, sub-branches, sub-products, and/or finished products It is a software application to ensure that the Software system meets its requirements and user expectations and does not fail unacceptably. way. There are different types of tests. Exploring a set of tasks that can be planned and done systematically. Different test scenarios should be carefully monitored and bugs should be fixed. User-designed testing techniques are designed to prove that the software is free and clear of errors. To do this, there are many ways to test system integrity, completeness, and maintenance. An important phase of software development is concerned with translating design specifications into error-free source code. Tests are performed to ensure that the system does not fail and that it meets the specifications and satisfies the user. System testing is done systematically with test data containing all possible data combinations to test system features. The test data was adapted to each module, which took care of all the program modules.

The following are the qualifications for a good test:

A good test requires nothing.

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A good test should be "the best of the type".

Good testing should not be too easy or too difficult.

Checking the White Box:

The white box test sometimes called a glass box test is a design case test that uses a design control to detect test cases. By using white box test methods, a software developer can detect those test cases

- Ensure that all independent modular methods are used at least once.
- Use all rational decisions in their true and false side.
- Make all the loops in their boundaries and their working parameters at once.
- Use internal data structure to ensure its validity.

For example, in this project, a white box test is performed against a patient module. Without entering the text when we use it displays the message "First add the record and save it" otherwise it should be saved.

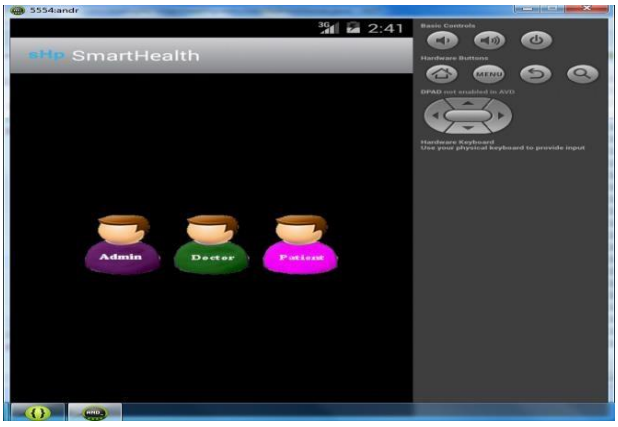
Checking the Black Box:

The module works with inputs that may cause errors. The output is then checked to see if an error has occurred. This method cannot be used to check for all errors, as some errors may depend on the code or algorithm used to run the module.

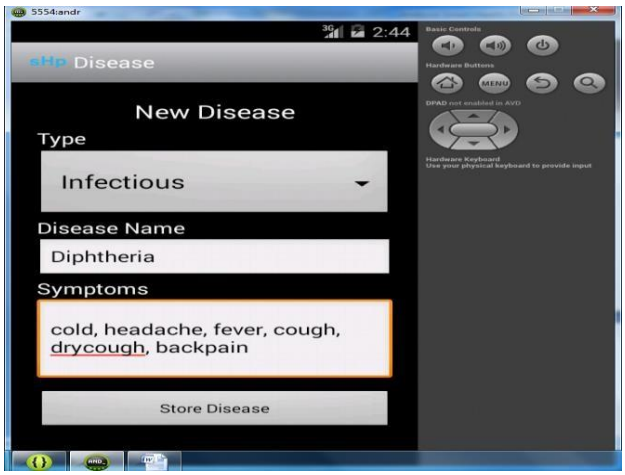
VI. RESULT DISCUSSION

With the help of the reference we have collected, we achieved the expected outcome. Using SQLite we are storing the medical records, patient records, and doctor records. The stored disease type will show on the disease creating page. The user portal has a login page in which they can register and log in to the application. The user can search for the disease by entering the symptoms and they can also search for the doctor. The application will provide the medicine for the disease and the doctor details who are specialist for that disease along with the hospital details. The following are the screenshots of our application,

Home Page:



Store Disease Type:



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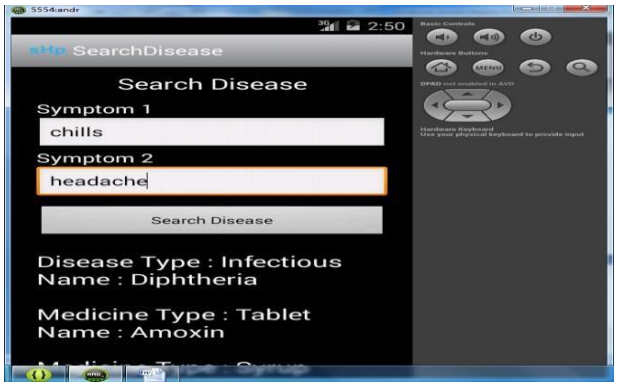
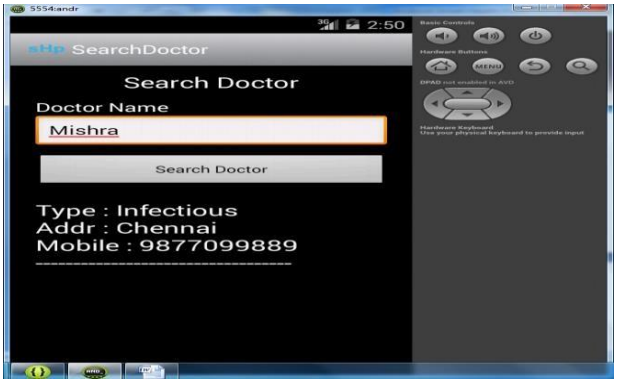
Add Medicine:

Search Disease:



Search Doctor:



VII. CONCLUSION

This program can be used by all patients or their family members who need help in emergencies. It is very easy to handle. The structure of our system is simple and the maintenance process of our system is simple. Therefore, the intended goal was achieved successfully.

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