



SARFRAZ AHMED
01-235172-054
MUHAMMAD ASFAND YAR KHAN
01-235172-037

MedPredict: Pharmaceutical Drug Data Automation

Bachelor of Science in Information Technology

Supervisor: Dr. Muhammad Asfand-e-Yar Khan

Department of Computer Science
Bahria University, Islamabad

February, 2021

Abstract

As there are many Pharma industries in Pakistan so each company contains different name of same symptoms medicine having same chemical formula. So, it's a challenging thing to memories all the brands medicine name for one disease. So, by using this project they are able to search a drug by its salt or chemical. If they know the chemical formula, they can search all the companies' medicine that falls in that chemical formula category. They can also search for a chemical formula by typing the name of a medicine or drug. An end user is facilitated through this project as they can view all the details along a medicine like name, dosage, chemical, potency, company name, symptoms etc. Also, they might be able to search a medicine and its details by providing the symptoms. The similarity of symptoms will be predicted on the basis of sentiments given by the user like symptoms, rating, useful count and for that reason we will be using a dataset also. All the information will be stored in the database table in their respective fields.

Contents

| | |
|---|----|
| Abstract | i |
| 1 Introduction | 1 |
| 1.1 Problem Description | 1 |
| 1.2 Project Objective | 2 |
| 1.3 Project Scope | 2 |
| 2 Literature Review | 3 |
| 2.1 Pharmapedia Pakistan: | 4 |
| 2.2 PharmaPlus: | 4 |
| 2.3 Dawaai: | 4 |
| 2.4 Marham: | 4 |
| 2.5 Dataset Authenticity: | 5 |
| 2.5.1 Owner | 5 |
| 2.5.2 Source | 5 |
| 2.5.3 Attributes | 6 |
| 3 Requirement Specifications | 7 |
| 3.1 Poposed System | 7 |
| 3.2 Requirment Specification | 8 |
| 3.2.1 Functional Requirements | 8 |
| 3.2.2 Non Functional Requirment | 11 |
| 3.2.3 Use case/UML Diagram | 12 |
| 3.3 General Constraints | 13 |
| 3.3.1 General Constraints | 13 |
| 3.3.2 Hard ware Limitations | 14 |
| 3.3.3 Data Base | 14 |
| 4 Design | 15 |
| 4.1 System Architecture | 15 |
| 4.2 Design Methodology | 16 |
| 4.3 High Level Design | 17 |
| 4.3.1 Administrator Login | 17 |
| 4.3.2 Administrator Dashboard | 18 |
| 4.3.3 User Dashboard | 19 |
| 4.4 Low Level Design | 21 |
| 4.5 Database Design | 23 |

| | | |
|-------------------|--|-----------|
| 4.6 | System Sequence Diagram | 25 |
| 4.7 | GUI Design | 26 |
| 4.7.1 | Register | 26 |
| 4.7.2 | Login | 26 |
| 4.7.3 | Admin Dashboard | 27 |
| 4.7.4 | User Dashboard | 27 |
| 4.7.5 | Entity Relationship Diagram | 28 |
| 5 | System Implementation | 29 |
| 5.1 | System Architecture | 29 |
| 5.1.1 | Web Application | 30 |
| 5.1.2 | Android Application | 30 |
| 5.2 | Tools and Technologies | 30 |
| 5.2.1 | Android Studio | 30 |
| 5.2.2 | Visual Studio Code | 30 |
| 5.2.3 | Wamp Server | 30 |
| 5.2.4 | API | 31 |
| 5.2.5 | Mysql | 31 |
| 5.2.6 | MVC | 31 |
| 5.2.7 | Lucid chart | 31 |
| 5.2.8 | Smart draw | 31 |
| 6 | System Testing and Evaluation | 33 |
| 6.1 | Graphical User Interface Testing | 33 |
| 6.2 | Usability Testing | 34 |
| 6.2.1 | Test Case for Register | 34 |
| 6.2.2 | Test Case for Login | 35 |
| 6.2.3 | Test Case for Manage | 36 |
| 6.2.4 | Test Case for Search | 37 |
| 6.2.5 | Test Case for Predict | 37 |
| 6.2.6 | Test Case for Report | 38 |
| 6.2.7 | Test Case for Logout | 38 |
| 6.3 | Software Performance Testing | 38 |
| 6.4 | Compatibility Testing | 39 |
| 6.5 | Exception Handling | 40 |
| 6.6 | Load Testing | 40 |
| 6.7 | Security Testing | 40 |
| 7 | Conclusions | 41 |
| 7.0.1 | Future | 42 |
| A | User Manual | 43 |
| References | | 45 |

List of Figures

| | | |
|-----|--|----|
| 3.1 | Fully Dressed Use Case of Signup and Login | 9 |
| 3.2 | Fully Dressed Use Case of Manage Medicine | 9 |
| 3.3 | Fully Dressed Use Case of Search Medicine | 10 |
| 3.4 | Fully Dressed Use Case of Predict Medicine | 11 |
| 3.5 | Admin Use Case | 13 |
| 4.1 | System Architecture | 15 |
| 4.2 | Design Methodology | 16 |
| 5.1 | System Architecture | 29 |