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**3. Architectural Design**

**3.1. Web Architecture**

**图片包含 屏幕截图

描述已自动生成**The Precision Medicine Matching System will run in the client‐server architecture. The client will establish a TCP/IP connection to a web server through a browser. The web server will be hosted by ???® with a ???® web server as backup. The web server is maintained by the Apache® web server software on a Linux operating system. The web server will communicate with a PostgreSQL database.

**3.3. Data Design**

**3.3.1.** **Data Design Description**

PostgreSQL database connects with DAO using JDBC API.

**图片包含 屏幕截图

描述已自动生成3.3.2. Precision Medicine Matching System Database**

**3.3.3. Data Dictionary of DosingGuideline table**

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Data Type | Description | Example |
| ID | VARCHAR | Unique identifier of dosing guideline information | PA166104997 |
| Name | VARCHAR | Name of the dosing guideline | Annotation of CPIC Guideline for abacavir and HLA-B |
| ObjectClass | VARCHAR | Guideline Annotation or Clinical Pharmacogenetics Implementation Consortium | Guideline Annotation |
| isRecommendation | BOOLEAN |  | TRUE |
| DrugId | VARCHAR | Unique identifier of the drug involved in dosing guideline | PA448004 |
| Source | VARCHAR | Source of dosing guideline | Clinical Pharmacogenetics Implementation Consortium |
| SummaryMarkdown | TEXT |  | *(markdown string omitted)* |
| TextMarkdown | TEXT |  | *(markdown string omitted)* |
| Raw | TEXT | Raw data in JSON format | *(JSON string omitted)* |

**3.3.4 Data Dictionary of DrugLabel table**

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Data Type | Description | Example |
| ID | VARCHAR | Unique identifier of dug label information |  |
| Name | VARCHAR | Name assigned to the label by PharmGKB |  |
| ObjectClass | VARCHAR |  |  |
| isAlternativeDrugAvailablr | BOOLEAN |  |  |
| hasDosingInformation | BOOLEAN |  |  |
| PrescribingMarkdown | TEXT |  | *(markdown string omitted)* |
| Source | VARCHAR | The source that originally authored the label (e.g. FDA, EMA) |  |
| TextMarkdown | TEXT |  | *(markdown string omitted)* |
| SummaryMarkdown | TEXT |  | *(markdown string omitted)* |
| Raw | TEXT | Raw data in JSON format | *(JSON string omitted)* |
| DrugID | VARCHAR | Unique identifier of the drug |  |

**3.3.5 Data Dictionary of Drug table**

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Data Type | Description | Example |
| ID | VARCHAR | Unique identifier of the drug |  |
| Name | VARCHAR | Name PharmGKB uses for this drug |  |
| ObjectClass | VARCHAR |  |  |
| isBiomarker | BOOLEAN |  |  |
| DrugURL | TEXT |  |  |
|  |  |  |  |
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1. **Glossary**

**5.1. Acronyms and Abbreviations**

|  |  |
| --- | --- |
| **DAO** | Data Access Object |
|  |  |
| **EJB** | Enterprise Java Beans |
|  |  |
| **HTTP** | Hypertext Transfer Protocol |
|  |  |
| **J2EE** | Java 2 Platform Enterprise Edition |
|  |  |
| **JSP** | Java Server Page |
|  |  |
| **SQL** | Standard Query Language |
|  |  |
| **TCP/IP** | Transmission Control Protocol / Internet Protocol |
|  |  |
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