# 设计文档

## 软件结构

后端软件分层见图1：



图1：软件结构

* Request Dispatcher负责处理Servlet请求，根据服务类型讲请求指派给不同Service Operator处理，将处理结果返回用户。
* Service Operator执行用户请求具体操作，实现接口定义功能。
* 数据层实现数据库到数据对象映射，包括case数据和资源数据。资源数据包括医生和科室数据，是常驻内存的，只需要保证资源数据和数据库数据的一致性。Case数据服务当前各种咨询请求，与用户session关联。

## 基本类结构图



图2：基本类结构图

## 对象缓存



图3：对象缓存

## 数据库字典

* **科室表，department：**

|  |  |  |
| --- | --- | --- |
| **字段名** | **类型** | **说明** |
| **id** | **UNSIGNED INT** | **科室id(primary key)** |
| **name** | **char(32)** | **科室名称** |
| **version** | **INT** | **版本** |

* **医生表，doctor：**

|  |  |  |
| --- | --- | --- |
| **字段名** | **类型** | **说明** |
| **id** | **UNSIGNED INT** | **医生id(primary key)** |
| **name** | **char(10)** | **医生名字** |
| **accountname** | **char(32)** | **医生账户名** |
| **hospital** | **char(64)** | **所在医院** |
| **departmentid** | **INT** | **科室id(foreign key->department)** |
| **introductionurl** | **char(256)** | **医生介绍URL** |
| **thumbnailurl** | **char(256)** | **肖像缩略图URL** |
| **portraiturl** | **char(256)** | **肖像图URL** |
| **password** | **char(16)** | **医生密码(MD5)** |
| **temppassword** | **char(16)** | **重置临时密码(MD5)** |
| **thankcount** | **UNSIGNED INT** | **收到感谢数** |

* **用户表，user：**

|  |  |  |
| --- | --- | --- |
| **字段** | **类型** | **说明** |
| **id** | **UNSIGNED INT** | **用户id(primary key)** |
| **name** | **char(32)** | **用户账户名字** |
| **registeringtime** | **BIGINT** | **注册时间** |
| **lastlogintime** | **BIGINT** | **上次登录时间** |
| **password** | **char(16)** | **用户密码(MD5)** |
| **temppassword** | **char(16)** | **重置临时密码(MD5)** |

* **在线咨询表，onlinecase：**

|  |  |  |
| --- | --- | --- |
| **字段** | **类型** | **说明** |
| **id** | **UNSIGNED INT** | **在线咨询id(primary key)** |
| **title** | **char(64)** | **标题** |
| **userid** | **UNSIGNED INT** | **创建咨询用户id(foreign key->user)** |
| **doctorid** | **UNSIGNED INT** | **咨询医生id(foreign key->doctor)** |
| **creationtime** | **BIGINT** | **咨询创建时间** |
| **status** | **UNSIGNED TINYINT** | **咨询状态** |

* **在线咨询项表，olineitem：**

|  |  |  |
| --- | --- | --- |
| **字段** | **类型** | **说明** |
| **id** | **UNSIGNED INT** | **咨询项id(primary key)** |
| **caseid** | **UNSIGNED INT** | **在线咨询id(foreign key->onlinecase)** |
| **itempos** | **UNSIGNED INT** | **第几条咨询项Index(caseid, itempos)** |
| **itemtype** | **UNSIGNED TINYINT** | **咨询项类型(文字，图片，声音)** |
| **content** | **char(256)** | **项内容（文字，或者图片和声音文件的URL，图片包括图片URL;缩略图URL）** |
| **timestamp** | **BIGINT** | **咨询项时间戳** |
| **ownerid** | **UNSIGNED INT** | **咨询项创建者id** |
| **ownertype** | **UNSIGNED TINYINT** | **创建者类型** |
| **transactionid** | **char(64)** | **交易流水号(支付宝返回的)** |

* **电话咨询表，phonecase：**

|  |  |  |
| --- | --- | --- |
| **字段** | **类型** | **说明** |
| **id** | **UNSIGNED INT** | **电话咨询id(primary key)** |
| **userid** | **UNSIGNED INT** | **创建咨询用户id(foreign key->user)** |
| **doctorid** | **UNSIGNED INT** | **咨询医生id(foreign key->doctor)** |
| **creationtime** | **BIGINT** | **咨询创建时间** |
| **status** | **UNSIGNED TINYINT** | **咨询状态** |
| **confirmtime** | **BIGINT** | **咨询确认时间** |
| **needexpress** | **BOOLEAN** | **是否需要快递** |
| **progress** | **UNSIGNED TINYINT** | **咨询进度** |
| **company** | **char(32)** | **快递公司名字** |
| **trackingnumber** | **char(64)** | **运单号** |
| **transactionid** | **char(64)** | **交易流水号(支付宝返回的)** |

* **推荐人表，referral：**

|  |  |  |
| --- | --- | --- |
| **字段** | **类型** | **说明** |
| **id** | **UNSIGNED INT** | **推荐人id(primary key)** |
| **name** | **char(10)** | **推荐人名字** |
| **organization** | **char(64)** | **推荐人单位** |
| **referralcode** | **char(64)** | **推荐人代码(建索引)** |

* **推荐统计表，referstatistic：**

|  |  |  |
| --- | --- | --- |
| **字段** | **类型** | **说明** |
| **userid** | **UNSIGNED INT** | **推荐的用户id(primary key, foreign key->user)** |
| **referralid** | **UNSIGNED INT** | **推荐人id(foreign id->referral)** |