# Database Design

## Data Table Design Checklist

|  |  |  |  |
| --- | --- | --- | --- |
| **Serial number** | **Table Chinese name** | **Table English name** | **Table Function Description** |
| 1 | Constant category table | ConstatntType | The constant categories in the system are stored . Drop-down box data that does not involve business logic processing can be stored in this table , and users can maintain it at any time. |
| 2 | Constant term table | Constant Item | The constant categories in the system are stored . Drop-down box data that does not involve business logic processing can be stored in this table , and users can maintain it at any time. |
| 3 | Department table | Department | Stores information of all departments in the hospital, such as orthopedics |
| 4 | Registration level table | RegistLevel | Store registration level information, such as: expert number, ordinary number |
| 5 | User Table | User | Store all user information |
| 6 | Settlement Category Table | SettleCategory | Stores the patient's settlement category information, such as: self-funded, medical insurance, new rural cooperative medical care, etc. |
| 7 | Disease classification table | DiseCategory | Store disease classification information, such as intestinal diseases, joint diseases, etc. |
| 8 | Disease Table | Disease | Store disease information, such as intestinal coccidiosis, knee joint tuberculosis, etc. |
| 9 | Expense Accounts | ExpenseClass | Stores information about charging items, such as registration fees, medical treatment fees, etc. |
| 10 | Non-drug charges list | Fmeditem | Storage of non-drug charges, such as bed fees, CT fees, etc. |
| 1 1 | Drug Catalog | D rugs | Storage charges for medicines. |
| 1 2 | Schedule Rules | Rule | Stores scheduling rule information, such as: Dr. Zhang San from the Department of Orthopedics is on duty on Monday morning |
| 1 3 | Schedule | Scheduling | Stores shift information, such as: Dr. Zhang San from the Department of Orthopedics is on duty in the morning of 2019-1-28 |
| 1 4 | Patient registration information form | Register | Store the patient's previous registration information |
| 1 5 | Patient Medical Records Home Page | MedicalRecord | Stores the patient's medical record homepage information for all previous registrations |
| 1 6 | Patient Assessment/Diagnosis Form | MedicalDisease | Store the patient's previous diagnoses |
| 17 | Patient Examination/Testing/Disposition Request Form | CheckApply | Stores the examination/test request information prescribed by the visiting doctor to the patient |
| 18 | Inspection/Testing/Disposal Application Template | CheckTemplate | Doctors save commonly used examinations as templates for easy use next time |
| 19 | Inspection/Test/Disposal Template Detailed List | CheckRelation | Details of the deposit inspection/testing/disposal application template |
| 2 0 | Patient prescription form | P rescription | Store prescriptions for medicines written by doctors to patients |
| twenty one | Patient's prescription list | P rescriptionDetailed | Stores the details of the prescriptions for finished medicines written by doctors to patients |
| twenty two | Prescription template for patent medicine | DrugsTemplate | Doctors save commonly used prescriptions of patent medicines as templates and save them in this table for easy use next time |
| twenty three | Drug Template Detailed List | DrugsDetailed | Many-to-many association table between the drug table and the finished drug prescription template table |
| twenty four | Patient Herbal Prescription Form | HerbalPrescription | Stores information about herbal medicine prescriptions given by doctors to patients |
| 25 | Herbal prescription list | HerbalDetailed | Many-to-many association table between the herbal medicine table and the herbal prescription table |
| 26 | Herbal Prescription Template Sheet | HerbalTemplate | Doctors save commonly used herbal prescriptions as templates for easy use next time |
| 2 7 | Herbal Medicine Template Detailed List | HerbalTempDetailed | Many-to-many association table between the Herbs table and the Herbal Prescription Templates table |
| 2 8 | Patient Cost Detail | Patient Costs​ | This table stores the patient's consumption information in the hospital. This table may have the largest number of records. |
| 2 9 | Invoice table | Invoice​ | Store invoice usage information |
| 30 | Operator's daily report | Registry Work | Store the daily settlement information of the registered toll collector |

## Detailed data table design

### *Table name: ConstantType (constant category table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Constant Category Code | ConstantTypeCode | VARCHAR(64) |  | no |  | Such as DeptType |
| Constant Class Name | ConstantTypeName | VARCHAR(64) |  | no |  | Such as gender |
| Delete Mark | DelMark | INT(1) |  | no | 1 | 1- Normal  0- Deleted |

### *Table name: Constant Item*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Constant category ID | ConstantTypeID | INT(9) | Foreign Keys | no |  | Points to *ConstantType(* ID *)* |
| Constant Encoding | ContantCode | VARCHAR(64) |  | no |  |  |
| Constant term name | ConstantName | VARCHAR(64) |  | no |  | Male , female, etc. |
| Delete Mark | DelMark | INT(1) |  | no | 1 | 1- Normal  0- Deleted |

### *Table name: Department*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Department Code | DeptCode | VARCHAR(64) |  | no |  | Such as: SJNK |
| Department Name | DeptName | VARCHAR(64) |  | no |  | Such as: Neurology |
| Department classification | DeptCategoryID | INT(9) | Foreign Keys |  |  | Points to ContextItem ( ID) |
| Department Type | DeptType | INT(1) |  |  |  | 1-Clinical  2-Medical Technology  3- Finance  4-Administration  5-Others |
| Delete Mark | DelMark | INT( 1 ) |  | no | 1 | 1-Normal  0 - Deleted​ |

### *Table name: RegistLevel (registration level table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Number Code | RegistCode | VARCHAR(64) |  | no |  |  |
| Alias Name | RegistName | VARCHAR(64) |  | no |  |  |
| Display sequence number | Sequence No | INT( 3 ) |  |  |  |  |
| Registration fee | RegistFee | D ECIMAL (8,2) |  |  |  |  |
| Registration limit | RegistQuota | INT( 3 ) |  |  |  |  |
| Delete Mark | DelMark | INT( 1 ) |  | no | 1 | 1-Normal  0 - Deleted​ |

### *Table name: User (user table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Login Name | UserName | VARCHAR(64) |  | no |  |  |
| password | Password | VARCHAR(64) |  | no |  |  |
| Real name | RealName | VARCHAR(64) |  | no |  |  |
| User Category | UseType | INT(1 ) |  |  |  | 1 - Hospital Administrator  2 - Registered toll collector  3 - Outpatient Doctor  4 - Medical technician  5- Pharmacy Operator  6 – Financial Administrator |
| Doctor's Title ID | DocTitleID | INT(9 ) | Foreign Keys |  |  | Point to the Constant Item (ID) |
| Participate in shift scheduling | IsScheduling | Char(1) |  |  |  | whether​​ |
| Department ID | DeptID | INT(9) | Foreign Keys |  |  | Point to *Department (* ID *)* |
| Registration level ID | Register your ID | INT(9) | Foreign Keys |  |  | Points to *RegistLevel (ID)* |
| Delete Mark | DelMark | INT( 1 ) |  | no | 1 | 1-Normal  0 - Deleted​ |

### *Table name: SettleCategory (Settlement Category Table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Category Code | SettleCode | VARCHAR(64) |  | no |  |  |
| Category Name | SettleName | VARCHAR(64) |  | no |  |  |
| Display sequence number | Sequence No | INT(3) |  |  |  |  |
| Delete Mark | DelMark | INT( 1 ) |  | no | 1 | 1-Normal  0 - Deleted​ |

### *Table name: DiseCategory (Disease classification table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Category Code | DicaCode | VARCHAR(64) |  | no |  |  |
| Category Name | DicaName | VARCHAR(64) |  | no |  |  |
| Display sequence number | Sequence No | INT(3) |  |  |  |  |
| Disease Type | D ica Type​ | I NT(1) |  | no |  | 1-Western medicine  2- Traditional Chinese Medicine |
| Delete Mark | DelMark | INT( 1 ) |  | no | 1 | 1-Normal  0 - Deleted​ |

### *Table Name: Disease*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Disease mnemonic codes | DiseaseCode | VARCHAR(64) |  | no |  |  |
| Disease Name | DiseaseName | VARCHAR(255) |  | no |  |  |
| International ICD Code | DiseaseICD | VARCHAR(64) |  |  |  |  |
| Disease classification | DiseCategoryID | INT(9) | Foreign Keys | no |  | Point to *DiseCategory (ID)* |
| Delete Mark | DelMark | INT( 1 ) |  | no | 1 | 1-Normal  0 - Deleted​ |

### *Table name: ExpenseClass (Expense Class Table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Expense Account Code | ExpCode | VARCHAR(64) |  | no |  |  |
| Expense item name | ExpName | VARCHAR(64) |  | no |  |  |
| Delete Mark | DelMark | INT( 1 ) |  | no | 1 | 1-Normal  0 - Deleted​ |

### *Table name: Fmeditem (non-drug charge item table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Project Code | Item Code | VARCHAR(64) |  | no |  |  |
| Project Name | Item Name | VARCHAR(64) |  | no |  |  |
| Specification | Format | VARCHAR(64) |  |  |  |  |
| unit price | Price | D ECIMAL (8,2) |  | no |  |  |
| Expense account ID | Exp ClassID | INT(9) | Foreign Keys |  |  | Points to ExpenseClass ( ID ) |
| Execution department ID | DeptID | INT(9) | Foreign Keys |  |  | Point to Department ( ID ) |
| Pinyin mnemonic code | MnemonicCode | VARCHAR( 6 4) |  |  |  |  |
| Creation time | CreationDate | DATETIME |  | no |  |  |
| Last modified time | LastUpdateDate | DATETIME |  |  |  |  |
| Project Type | R ecordType | INT (1) |  | no |  | 1- Check  2- Inspection  3-Disposal |
| Delete Mark | DelMark | INT( 1 ) |  | no | 1 | 1-Normal  0 - Deleted​ |

### *Table name: Drugs (drug catalog table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Drug Code | DrugsCode | CHAR(14) |  | no |  |  |
| Drug Name | DrugsName | VARCHAR( 6 4) |  | no |  |  |
| Drug Specifications | DrugsFormat | VARCHAR( 6 4) |  |  |  |  |
| Packing Unit | DrugsUnit | VARCHAR( 6 4) |  |  |  |  |
| Manufacturer | Manufacturer | VARCHAR( 512 ) |  |  |  |  |
| Drug dosage form | DrugsDosageID | INT( 9 ) | Foreign Keys |  |  | Point to the Constant Item (ID) |
| Drug Type | DrugsTypeID | INT( 9 ) | Foreign Keys |  |  | Point to the Constant Item (ID) |
| Drug price | DrugsPrice | DECIMAL(8,2) |  | no |  |  |
| Pinyin mnemonic code | MnemonicCode | VARCHAR( 6 4) |  |  |  |  |
| Creation time | CreationDate | DATETIME |  | no |  |  |
| Last modified time | LastUpdateDate | DATETIME |  |  |  |  |
| Delete Mark | DelMark | INT( 1 ) |  | no | 1 | 1-Normal  0 - Deleted​ |

### *Table name: Register (patient registration information table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Medical record number | CaseNumber | VARCHAR( 6 4) |  | no |  |  |
| Name | RealName | VARCHAR( 6 4) |  | no |  |  |
| gender | Gender | INT( 9 ) | Foreign Keys | no |  | Point to the Constant Item (ID) |
| ID number | IDnumber | VARCHAR(18) |  |  |  |  |
| Date of Birth | Birth Date | DATE |  |  |  |  |
| age | Age | INT( 3 ) |  |  |  |  |
| Age Type | AgeType | Char (1 ) |  |  |  | Years/months/days |
| Home address | HomeAddress | VARCHAR( 6 4) |  |  |  |  |
| Date of this visit | VisitDate | DATE |  | no |  |  |
| Afternoon | Noon | Char (2 ) |  | no |  | Morning/Afternoon |
| Department ID for this registration | DeptID | INT(9) | Foreign Keys | no |  | Point to *Department (* ID *)* |
| The doctor ID of this appointment | UserID | INT(9) | Foreign Keys | no |  | Point to User *(ID)* |
| This registration level ID | RegistLeID | INT(9) | Foreign Keys | no |  | Points to *RegistLevel (ID)* |
| Settlement Category ID | Settle ID | INT(9) | Foreign Keys | no |  | Points to *SettleCategory (ID)* |
| Do you need a medical record? | IsBook | Char (1 ) |  |  |  | whether​​ |
| Registration time | RegisterTime​ | DATETIME |  | no |  |  |
| Registrar ID | RegisterID | INT(9) | Foreign Keys | no |  | Point to User(ID) |
| Current visit status | V isitState | INT(1) |  | no |  | 1-Registered  2 - Doctor's visit  3 - End of consultation  4- Account has been cancelled |

### *Table name: MedicalRecord (patient medical record homepage table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Medical record number | CaseNumber | VARCHAR(64) |  | no |  |  |
| Registration ID | *RegistID* | INT(9) | Foreign Keys | no |  | Point to *Register(ID)* |
| Chief complaint | Readme | VARCHAR(512) |  |  |  |  |
| History of present illness | Present | VARCHAR(512) |  |  |  |  |
| Current medical treatment | PresentTreat | VARCHAR(512) |  |  |  |  |
| Past medical history | History | VARCHAR(512) |  |  |  |  |
| History of allergies | Allergy | VARCHAR(512) |  |  |  |  |
| Physical examination | Physique | VARCHAR(512) |  |  |  |  |
| Inspection suggestions | Proposal | VARCHAR(512) |  |  |  |  |
| Precautions | Careful | VARCHAR(512) |  |  |  |  |
| Check the results | CheckResult | VARCHAR(512) |  |  |  |  |
| Diagnosis | Diagnosis | VARCHAR(512) |  |  |  |  |
| Handling opinions | Handling | VARCHAR(512) |  |  |  |  |
| Medical record status | CaseState | INT ( 1 ) |  |  |  | 1- Temporary storage  2 - Submitted  3 - End of consultation |

### *Table Name:* MedicalDisease (Patient Assessment/Diagnosis *Table* )

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Medical Record ID | Medical ID | INT(9) | Foreign Keys | no |  | Point to *MedicalRecord (ID)* |
| Registration ID | *RegistID* | INT(9) | Foreign Keys | no |  | Point to *Register(ID)* |
| Disease ID | Disease ID | INT(9) | Foreign Keys | no |  | Point to *Disease (ID)* |
| Type of diagnosis | DiagnoseType | INT (1) |  |  |  | 1-Western medicine  2- Traditional Chinese Medicine |
| Date of onset | GetSiskDate | DATETIME |  |  |  |  |
| Types of diagnosis | DiagnoseCate | INT (1) |  |  |  | 1- Initial visit  2- Final diagnosis |

### *Table name: CheckApply (Patient examination/testing/treatment application form)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Medical Record ID | MedicalID | INT(9) | Foreign Keys | no |  | Point to *MedicalRecord (ID)* |
| Registration ID | *RegistID* | INT(9) | Foreign Keys | no |  | Point to *Register(ID)* |
| Project ID | *ItemID* | INT(9) | Foreign Keys | no |  | Point to *Fmeditem(ID)* |
| Project Name | Name | VARCHAR( 6 4) |  | no |  |  |
| Purpose | Objective​ | VARCHAR( 512 ) |  |  |  |  |
| Examination area | Position | VARCHAR( 6 4 ) |  |  |  |  |
| Expedited | Is Urgent | INT( 1 ) |  |  | 0 | 1 means urgent, 0 means not urgent |
| quantity | Num | INT( 3 ) |  |  |  |  |
| Opening time | Creation Time​ | DATETIME |  | no |  |  |
| Open a doctor ID | Doctor ID | INT (9) | Foreign Keys |  |  | Point to User (ID) |
| Inspector ID | CheckOperID | INT(9) | Foreign Keys | no |  | Point to User *(ID)* |
| Result entry person ID | ResultOperID | INT(9) | Foreign Keys | no |  | Point to User *(ID)* |
| Check time | Check Time​ | DATETIME |  |  |  |  |
| Check the results | Result | VARCHAR( 512) |  |  |  |  |
| Results Time | Result Time​ | DATETIME |  |  |  |  |
| state | State​ | INT (9) |  |  |  | 1- Temporary storage  2-Opened  3-Paid  4-Registered  5-Complete  6- Refund  0-Voided |
| Record Type | R ecordType | INT (1) |  | no |  | 1- Check  2- Inspection  3-Disposal |

### *Table name: Prescription (patient prescription table)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Medical Record ID | *MedicalID* | INT(9) | Foreign Keys | no |  | Point to *MedicalRecord (ID)* |
| Registration ID | *RegistID* | INT(9) | Foreign Keys | no |  | Point to *Register(ID)* |
| Open a doctor ID | UserID | INT(9) | Foreign Keys | no |  | Point to User *(ID)* |
| Prescription Name | *Prescription Name* | VARCHAR( 6 4) |  | no |  |  |
| Opening time | *Prescription Time* | DATETIME |  | no |  |  |
| Prescription status | *Prescription* State​ | INT( 1 ) |  | no |  | 1- Temporary storage  2-Opened  0-Voided |

### *Table name: PrescriptionDetailed (Detailed list of patient prescriptions)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Prescription ID of patent medicine | PrescriptionID | INT(9) | Foreign Keys | no |  | Point to *Prescription (ID)* |
| Drug ID | Drugs ID | INT(9) | Foreign Keys | no |  | Point to *Drugs (ID)* |
| usage | DrugsUsage | VARCHAR( 6 4) |  |  |  |  |
| Dosage | Dosage | VARCHAR( 6 4) |  |  |  |  |
| Frequency | Frequency | VARCHAR( 6 4) |  |  |  |  |
| quantity | A mount | decimal(8,2) |  | no |  |  |
| state | State​ | INT (1) |  |  |  | 2-Opened  3-Paid  4-Medications have been issued  5-Drug returned  6- Refund |

### *Table name:* Patient Cost s *(Patient Cost Details )*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Registration ID | RegistID | INT(9) | Foreign Keys | no |  | Point to *Register (ID)* |
| Invoice ID | *Voice ID​* | INT(9) | Foreign Keys | no |  | Point to *invoice (ID)* |
| Project ID | *I temID* | INT(9 ) |  | no |  |  |
| Project Type | *Item Type​​* | INT(1) |  | no |  | 1- Non-pharmaceuticals  2-Medicine |
| Project Name | Name | VARCHAR( 6 4) |  | no |  |  |
| Project price | Price | decimal(8,2) |  | no |  |  |
| quantity | Amount | decimal(8,2) |  | no |  |  |
| Execution department ID | DeptID | INT(9) | Foreign Keys | no |  | Point to *Department (* ID *)* |
| Opening time | Createtime | DATETIME |  | no |  |  |
| Issuer ID | CreateOperID | INT(9) | Foreign Keys | no |  | Point to User (ID) |
| Collection/ refund time | PayTime | DATETIME |  | no |  |  |
| ID of the person collecting/refunding the fee | Register ID | INT(9) | Foreign Keys | no |  | Point to User (ID) |
| Payment Method | FeeType​ | INT (9) | Foreign Keys | no |  | Point to ContextItem (ID) |
| Refund corresponding record ID | BackID | INT(9) |  |  |  |  |

### *Table name: Regist Work (Operator daily report)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field Name** | **Field encoding** | **Data Types** | **Key-value** | **Can be null** | **default value** | **Notes** |
| ID | ID | INT(9) | Primary Key | no |  | Self-growth type |
| Toll collector ID | Register ID | INT(9) | Foreign Keys | no |  | Point to User *(ID)* |
| Daily settlement start time | Start Time​ | DATETIME |  | no |  |  |
| End of day time | End Time​ | DATETIME |  | no |  |  |