1. 用户模块

（1）用户表（user）

| 字段名 | 数据类型 | 说明 |
| --- | --- | --- |
| id | INT | 用户ID（主键） |
| username | VARCHAR(20) | 用户名（手机号） |
| password | VARCHAR(100) | 密码（BCrypt加密） |
| nickname | VARCHAR(50) | 昵称 |
| avatar | VARCHAR(255) | 头像URL |
| school\_id | INT | 学校ID（外键） |
| credit\_score | TinyINT | 信用分（默认100） |
| created\_at | DATETIME | 创建时间 |
| updated\_at | DATETIME | 更新时间 |

（2）学校表（school）

| 字段名 | 数据类型 | 说明 |
| --- | --- | --- |
| id | INT | 学校ID（主键） |
| School\_name | VARCHAR(100) | 学校名称 |

（3）短信验证码表（sms\_code）

| 字段名 | 数据类型 | 说明 |
| --- | --- | --- |
| id | INT | 验证码ID（主键） |
| phone | VARCHAR(20) | 手机号 |
| code | VARCHAR(6) | 验证码 |

2. 任务模块

（1）任务表（task）

| 字段名 | 数据类型 | 说明 |
| --- | --- | --- |
| id | INT | 任务ID（主键） |
| title | VARCHAR(100) | 任务标题 |
| description | Varchar(1024) | 任务描述 |
| category | Tinyint | 任务分类（生活、学习等） |
| reward | INT | 赏金金额 |
| status | Tinyint | 任务状态（待接单等） |
| publisher\_id | INT | 发布者ID（外键） |
| acceptor\_id | INT | 接单者ID（外键） |
| publish\_time | DATETIME | 发布时间 |
| deadline | DATETIME | 截止时间 |
| priority | INT | 任务优先级（普通、加急） |
| images | Varchar(1024) | 任务图片（JSON数组） |
| notes | Varchar(1024) | 任务备注 |
| created\_at | DATETIME | 创建时间 |
| updated\_at | DATETIME | 更新时间 |

3. 交易模块

（1）用户钱包表（user\_wallet）

| 字段名 | 数据类型 | 说明 |
| --- | --- | --- |
| id | INT | 钱包ID（主键） |
| user\_id | INT | 用户ID（外键） |
| balance | INT | 可用余额 |
| frozen\_balance | INT | 冻结金额 |
| created\_at | DATETIME | 创建时间 |
| updated\_at | DATETIME | 更新时间 |

（2）交易流水表（transaction）

| 字段名 | 数据类型 | 说明 |
| --- | --- | --- |
| id | INT | 交易ID（主键） |
| from\_user | INT | 支出用户ID（外键） |
| to\_user | INT | 收入用户ID（外键） |
| amount | INT | 交易金额 |
| type | INT | 交易类型（赏金、充值等） |
| task\_id | INT | 关联任务ID（外键） |
| created\_at | DATETIME | 创建时间 |

4. 通知模块

（1）通知表（notification）

| 字段名 | 数据类型 | 说明 |
| --- | --- | --- |
| id | INT | 通知ID（主键） |
| user\_id | INT | 接收用户ID（外键） |
| content | VARCHAR(1024) | 通知内容 |
| type | Tinyint | 通知类型（任务、系统等） |
| created\_at | DATETIME | 创建时间 |

（2）聊天记录表（chat）

| 字段名 | 数据类型 | 说明 |
| --- | --- | --- |
| id | INT | 聊天ID（主键） |
| from\_user | INT | 发送者ID（外键） |
| to\_user | INT | 接收者ID（外键） |
| content | Varchar(1024) | 聊天内容 |
| created\_at | DATETIME | 创建时间 |
|  |  |  |

1. 评价模块

（1）评价表（review）

| 字段名 | 数据类型 | 说明 |
| --- | --- | --- |
| id | INT | 评价ID（主键） |
| task\_id | INT | 任务ID（外键） |
| from\_user | INT | 评价者ID（外键） |
| to\_user | INT | 被评价者ID（外键） |
| rating | Tinyint | 评分（1-5） |
| comment | VARCHAR(1024) | 评价内容 |
| created\_at | DATETIME | 创建时间 |

建表Sql脚本

一、用户模块

1. 用户表（user）

sql

复制

CREATE TABLE user (

id INT AUTO\_INCREMENT PRIMARY KEY COMMENT '用户ID（主键）',

username VARCHAR(20) NOT NULL UNIQUE COMMENT '用户名（手机号）',

password VARCHAR(100) NOT NULL COMMENT '密码（BCrypt加密）',

nickname VARCHAR(50) COMMENT '昵称',

avatar VARCHAR(255) COMMENT '头像URL',

school\_id INT COMMENT '学校ID（外键）',

credit\_score TINYINT UNSIGNED DEFAULT 100 COMMENT '信用分（默认100）',

created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP COMMENT '创建时间',

updated\_at DATETIME DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP COMMENT '更新时间',

FOREIGN KEY (school\_id) REFERENCES school(id)) COMMENT='用户表';

2. 学校表（school）

sql

复制

CREATE TABLE school (

id INT AUTO\_INCREMENT PRIMARY KEY COMMENT '学校ID（主键）',

school\_name VARCHAR(100) NOT NULL COMMENT '学校名称') COMMENT='学校表';

3. 短信验证码表（sms\_code）

sql

复制

CREATE TABLE sms\_code (

id INT AUTO\_INCREMENT PRIMARY KEY COMMENT '验证码ID（主键）',

phone VARCHAR(20) NOT NULL COMMENT '手机号',

code VARCHAR(6) NOT NULL COMMENT '验证码',

created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP COMMENT '创建时间') COMMENT='短信验证码表';

二、任务模块

1. 任务表（task）

sql

复制

CREATE TABLE task (

id INT AUTO\_INCREMENT PRIMARY KEY COMMENT '任务ID（主键）',

title VARCHAR(100) NOT NULL COMMENT '任务标题',

description VARCHAR(1024) COMMENT '任务描述',

category TINYINT UNSIGNED COMMENT '任务分类（生活、学习等）',

reward INT UNSIGNED NOT NULL COMMENT '赏金金额',

status TINYINT UNSIGNED COMMENT '任务状态（待接单等）',

publisher\_id INT NOT NULL COMMENT '发布者ID（外键）',

acceptor\_id INT COMMENT '接单者ID（外键）',

publish\_time DATETIME COMMENT '发布时间',

deadline DATETIME COMMENT '截止时间',

priority INT UNSIGNED COMMENT '任务优先级（普通、加急）',

images VARCHAR(1024) COMMENT '任务图片（JSON数组）',

notes VARCHAR(1024) COMMENT '任务备注',

created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP COMMENT '创建时间',

updated\_at DATETIME DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP COMMENT '更新时间',

FOREIGN KEY (publisher\_id) REFERENCES user(id),

FOREIGN KEY (acceptor\_id) REFERENCES user(id)) COMMENT='任务表';

三、交易模块

1. 用户钱包表（user\_wallet）

sql

复制

CREATE TABLE user\_wallet (

id INT AUTO\_INCREMENT PRIMARY KEY COMMENT '钱包ID（主键）',

user\_id INT NOT NULL COMMENT '用户ID（外键）',

balance INT UNSIGNED NOT NULL COMMENT '可用余额',

frozen\_balance INT UNSIGNED NOT NULL COMMENT '冻结金额',

created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP COMMENT '创建时间',

updated\_at DATETIME DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP COMMENT '更新时间',

FOREIGN KEY (user\_id) REFERENCES user(id)) COMMENT='用户钱包表';

2. 交易流水表（transaction）

sql

复制

CREATE TABLE transaction (

id INT AUTO\_INCREMENT PRIMARY KEY COMMENT '交易ID（主键）',

from\_user INT NOT NULL COMMENT '支出用户ID（外键）',

to\_user INT NOT NULL COMMENT '收入用户ID（外键）',

amount INT UNSIGNED NOT NULL COMMENT '交易金额',

type INT UNSIGNED NOT NULL COMMENT '交易类型（赏金、充值等）',

task\_id INT COMMENT '关联任务ID（外键）',

created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP COMMENT '创建时间',

FOREIGN KEY (from\_user) REFERENCES user(id),

FOREIGN KEY (to\_user) REFERENCES user(id),

FOREIGN KEY (task\_id) REFERENCES task(id)) COMMENT='交易流水表';

四、通知模块

1. 通知表（notification）

sql

复制

CREATE TABLE notification (

id INT AUTO\_INCREMENT PRIMARY KEY COMMENT '通知ID（主键）',

user\_id INT NOT NULL COMMENT '接收用户ID（外键）',

content VARCHAR(1024) NOT NULL COMMENT '通知内容',

type TINYINT UNSIGNED NOT NULL COMMENT '通知类型（任务、系统等）',

created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP COMMENT '创建时间',

FOREIGN KEY (user\_id) REFERENCES user(id)) COMMENT='通知表';

2. 聊天记录表（chat）

sql

复制

CREATE TABLE chat (

id INT AUTO\_INCREMENT PRIMARY KEY COMMENT '聊天ID（主键）',

from\_user INT NOT NULL COMMENT '发送者ID（外键）',

to\_user INT NOT NULL COMMENT '接收者ID（外键）',

content VARCHAR(1024) NOT NULL COMMENT '聊天内容',

created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP COMMENT '创建时间',

FOREIGN KEY (from\_user) REFERENCES user(id),

FOREIGN KEY (to\_user) REFERENCES user(id)) COMMENT='聊天记录表';

五、评价模块

1. 评价表（review）

sql

复制

CREATE TABLE review (

id INT AUTO\_INCREMENT PRIMARY KEY COMMENT '评价ID（主键）',

task\_id INT NOT NULL COMMENT '任务ID（外键）',

from\_user INT NOT NULL COMMENT '评价者ID（外键）',

to\_user INT NOT NULL COMMENT '被评价者ID（外键）',

rating TINYINT UNSIGNED NOT NULL COMMENT '评分（1-5）',

comment VARCHAR(1024) COMMENT '评价内容',

created\_at DATETIME DEFAULT CURRENT\_TIMESTAMP COMMENT '创建时间',

FOREIGN KEY (task\_id) REFERENCES task(id),

FOREIGN KEY (from\_user) REFERENCES user(id),

FOREIGN KEY (to\_user) REFERENCES user(id)) COMMENT='评价表';

**实体类设计**

package com.example.campushelp.entity;

import jakarta.persistence.\*;import lombok.Data;import java.time.LocalDateTime;

@Data@Entity@Table(name = "user")public class User {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Integer id;

@Column(name = "username", length = 20, unique = true, nullable = false)

private String username;

@Column(name = "password", length = 100, nullable = false)

private String password;

@Column(name = "nickname", length = 50)

private String nickname;

@Column(name = "avatar", length = 255)

private String avatar;

@Column(name = "school\_id")

private Integer schoolId;

@Column(name = "credit\_score", columnDefinition = "TINYINT DEFAULT 100")

private Integer creditScore;

@Column(name = "created\_at", updatable = false)

private LocalDateTime createdAt;

@Column(name = "updated\_at")

private LocalDateTime updatedAt;}

2. 学校表（school）

java

复制

package com.example.campushelp.entity;

import jakarta.persistence.\*;import lombok.Data;

@Data@Entity@Table(name = "school")public class School {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Integer id;

@Column(name = "school\_name", length = 100, nullable = false)

private String schoolName;}

3. 短信验证码表（sms\_code）

java

复制

package com.example.campushelp.entity;

import jakarta.persistence.\*;import lombok.Data;import java.time.LocalDateTime;

@Data@Entity@Table(name = "sms\_code")public class SmsCode {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Integer id;

@Column(name = "phone", length = 20, nullable = false)

private String phone;

@Column(name = "code", length = 6, nullable = false)

private String code;

@Column(name = "created\_at", updatable = false)

private LocalDateTime createdAt;}

二、任务模块

1. 任务表（task）

java

复制

package com.example.campushelp.entity;

import jakarta.persistence.\*;import lombok.Data;import java.time.LocalDateTime;

@Data@Entity@Table(name = "task")public class Task {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Integer id;

@Column(name = "title", length = 100, nullable = false)

private String title;

@Column(name = "description", length = 1024)

private String description;

@Column(name = "category", columnDefinition = "TINYINT")

private Integer category;

@Column(name = "reward", nullable = false)

private Integer reward;

@Column(name = "status", columnDefinition = "TINYINT")

private Integer status;

@Column(name = "publisher\_id", nullable = false)

private Integer publisherId;

@Column(name = "acceptor\_id")

private Integer acceptorId;

@Column(name = "publish\_time")

private LocalDateTime publishTime;

@Column(name = "deadline")

private LocalDateTime deadline;

@Column(name = "priority")

private Integer priority;

@Column(name = "images", length = 1024)

private String images;

@Column(name = "notes", length = 1024)

private String notes;

@Column(name = "created\_at", updatable = false)

private LocalDateTime createdAt;

@Column(name = "updated\_at")

private LocalDateTime updatedAt;}

三、交易模块

1. 用户钱包表（user\_wallet）

java

复制

package com.example.campushelp.entity;

import jakarta.persistence.\*;import lombok.Data;import java.time.LocalDateTime;

@Data@Entity@Table(name = "user\_wallet")public class UserWallet {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Integer id;

@Column(name = "user\_id", nullable = false)

private Integer userId;

@Column(name = "balance", nullable = false)

private Integer balance;

@Column(name = "frozen\_balance", nullable = false)

private Integer frozenBalance;

@Column(name = "created\_at", updatable = false)

private LocalDateTime createdAt;

@Column(name = "updated\_at")

private LocalDateTime updatedAt;}

2. 交易流水表（transaction）

java

复制

package com.example.campushelp.entity;

import jakarta.persistence.\*;import lombok.Data;import java.time.LocalDateTime;

@Data@Entity@Table(name = "transaction")public class Transaction {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Integer id;

@Column(name = "from\_user", nullable = false)

private Integer fromUser;

@Column(name = "to\_user", nullable = false)

private Integer toUser;

@Column(name = "amount", nullable = false)

private Integer amount;

@Column(name = "type", nullable = false)

private Integer type;

@Column(name = "task\_id")

private Integer taskId;

@Column(name = "created\_at", updatable = false)

private LocalDateTime createdAt;}

四、通知模块

1. 通知表（notification）

java

复制

package com.example.campushelp.entity;

import jakarta.persistence.\*;import lombok.Data;import java.time.LocalDateTime;

@Data@Entity@Table(name = "notification")public class Notification {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Integer id;

@Column(name = "user\_id", nullable = false)

private Integer userId;

@Column(name = "content", length = 1024, nullable = false)

private String content;

@Column(name = "type", columnDefinition = "TINYINT", nullable = false)

private Integer type;

@Column(name = "created\_at", updatable = false)

private LocalDateTime createdAt;}

2. 聊天记录表（chat）

java

复制

package com.example.campushelp.entity;

import jakarta.persistence.\*;import lombok.Data;import java.time.LocalDateTime;

@Data@Entity@Table(name = "chat")public class Chat {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Integer id;

@Column(name = "from\_user", nullable = false)

private Integer fromUser;

@Column(name = "to\_user", nullable = false)

private Integer toUser;

@Column(name = "content", length = 1024, nullable = false)

private String content;

@Column(name = "created\_at", updatable = false)

private LocalDateTime createdAt;}

五、评价模块

1. 评价表（review）

java

复制

package com.example.campushelp.entity;

import jakarta.persistence.\*;import lombok.Data;import java.time.LocalDateTime;

@Data@Entity@Table(name = "review")public class Review {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Integer id;

@Column(name = "task\_id", nullable = false)

private Integer taskId;

@Column(name = "from\_user", nullable = false)

private Integer fromUser;

@Column(name = "to\_user", nullable = false)

private Integer toUser;

@Column(name = "rating", columnDefinition = "TINYINT", nullable = false)

private Integer rating;

@Column(name = "comment", length = 1024)

private String comment;

@Column(name = "created\_at", updatable = false)

private LocalDateTime createdAt;}