1. User Infomation System Design

1. Requirement Background

- To quickly get familar with golang programming, we build this simple system which contains several common components of a web service.

2. Design Target

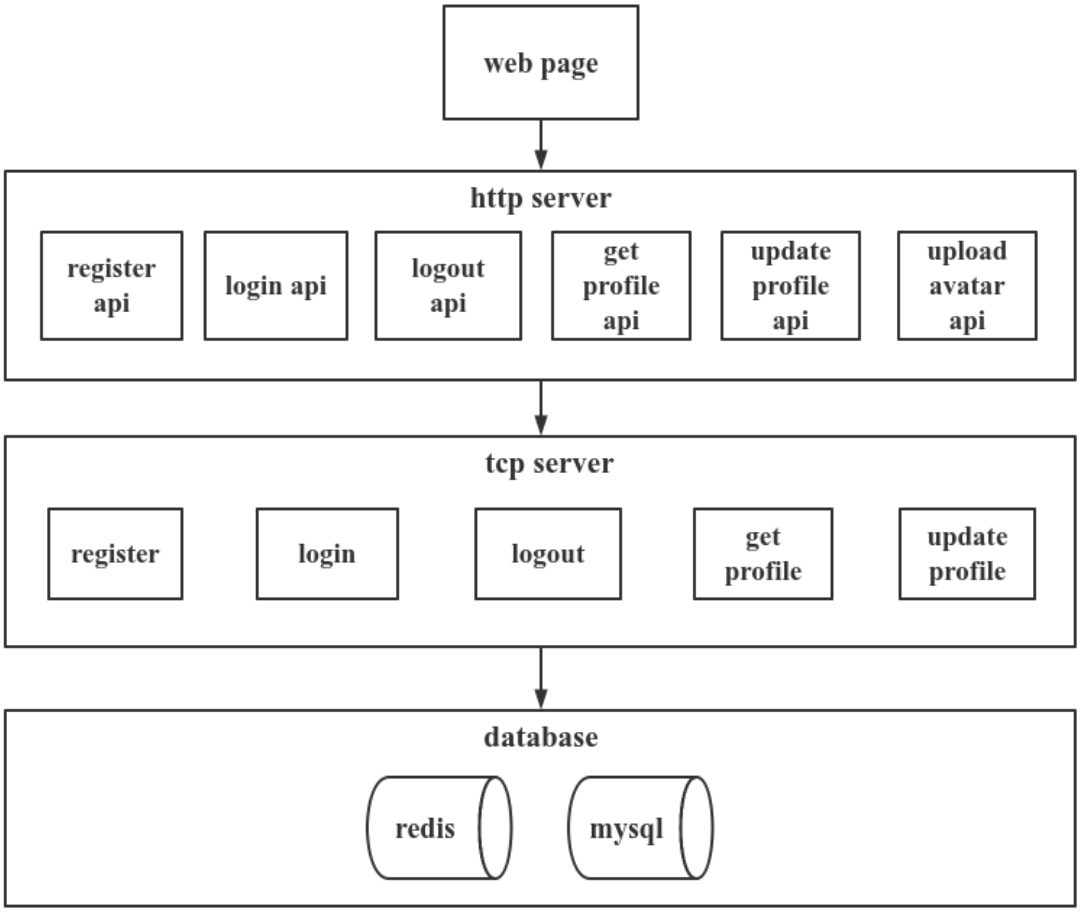
2.1 Core functions

- User account: User can register an account, login and logout.
- User profile: User can get his/her profile after login, and is able to update the profile, as well as upload an avatar. Note that the login status should be kept for a certain time so that users can visit their profiles without entering id and password.

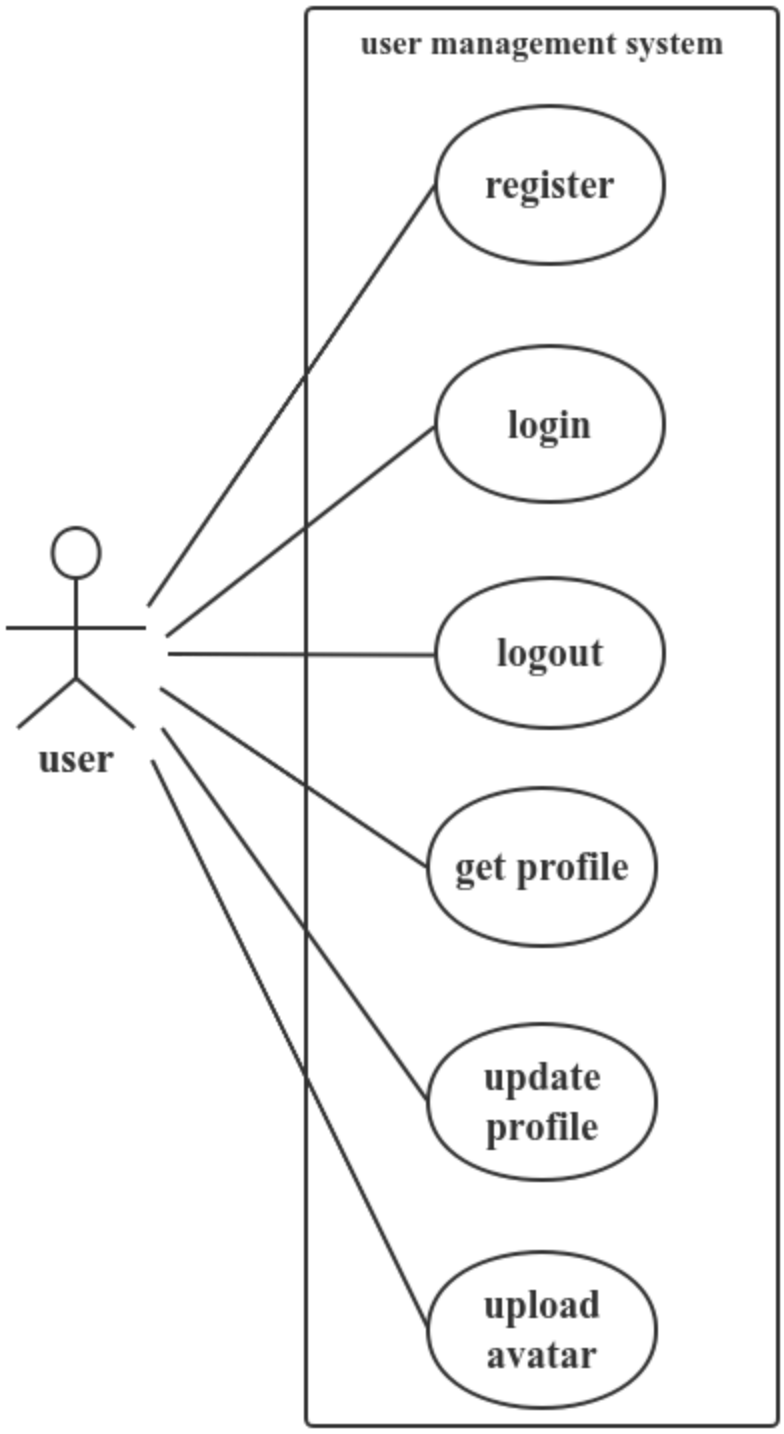
2.2 Performance

3. System Architecture

3.1 Architecture diagram

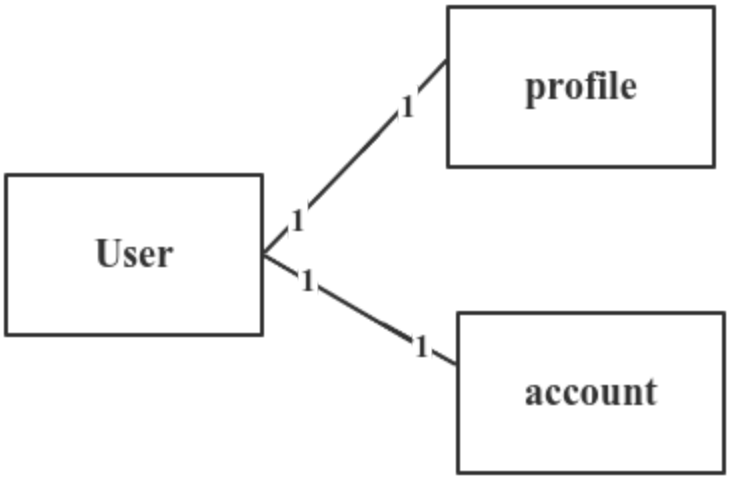


3.2 Use case diagram


user management system
register
login
logout
get profile
update profile
upload avatar
user

4. Data Model Design

4.1 Data model diagram



4.2 Database table design

profile_tab

```
CREATE TABLE `profile_tab`
(
`id` bigint unsigned NOT NULL AUTO_INCREMENT,
`user_id` bigint unsigned NOT NULL,
`nickname` varchar(255) NOT NULL DEFAULT '',
`birthday` DATE,
`email` varchar(255),
`avatar_url` varchar(255) NOT NULL DEFAULT '',
`create_time` bigint unsigned NOT NULL DEFAULT 0,
`update_time` bigint unsigned NOT NULL DEFAULT 0,
PRIMARY KEY (`id`),
KEY `idx_user_id` (`user_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_unicode_ci;
```

account_tab

```
CREATE TABLE `account_tab`
(
`id` bigint unsigned NOT NULL AUTO_INCREMENT,
`user_id` bigint unsigned NOT NULL,
`name` varchar(255) NOT NULL DEFAULT '',
`password` varchar(255) NOT NULL DEFAULT '' COMMENT 'encrypted by md5',
`status` tinyint(3) unsigned NOT NULL DEFAULT 0 COMMENT '0-available, 1-suspended, 2-deleted',
`create_time` bigint unsigned NOT NULL DEFAULT 0,
`update_time` bigint unsigned NOT NULL DEFAULT 0,
PRIMARY KEY (`id`),
KEY `idx_user_id` (`user_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_unicode_ci;
```

4.3 Cache design

5.