



University College Dublin
Ireland's Global University

University College Dublin

COMP3030J Software Engineering Project 2023-2024

Group_14_system_documentation

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1 Project background introduction

In the context of the urgent need for sustainable development, realizing the goal of sustainable communities in Article 11 of SDG has become a major problem for Nature's Edge Property Management Company. In existing communities, Nature's Edge Property Management Company has provided some convenient facilities, such as fitness equipment, community hospitals, etc. However, according to surveys, the utilization rate of these facilities is extremely low, making it difficult to achieve the goal of sustainable communities. Not only that, existing communities have problems with high energy consumption and high carbon emissions, which are inconsistent with the concept of sustainable development.

2 Project development process(Weekly process update)

The project process of the group will be updated weekly to show the progress and results of the team project.

2.1 week1

We started the group this week, got to know each other and came up with a name for the group. Team members gained a general understanding of each other's software engineering skills, also briefly read a brief description of the project, and had a brief discussion.

2.2 week2

By discussing and sharing the team members' understanding of the project details and SDGS, the team members hatched several design ideas and asked the TA some related questions. Finally, the theme of sustainable communities was identified among several selected topics. After determining the topic, the team members carried out a reasonable division of labor according to their respective abilities, and each team member recognized his own task.

2.3 week3

Before starting the code section, team members created a common document for team members to update tasks and fill in everyone's progress. At the same time, we mainly discuss the details of the project function and divide the project function into 7 modules. Assign team members a detailed description of each module's project function as a task to think about and fill out a collaboration document, and ask team members to complete an interaction diagram for each part.

2.4 week4

During the week, team members supplemented the detailed description of all module function points, discussed and pointed out some problems in the function points described by each person, and made corrections. The function of the appearance of some technical terms is also supplemented. In addition, the VM is configured to open web pages for work. The framework to be used for the front and back end development has been discussed and finalized, and the members of the working team have shared some component libraries for the development work, but the database for this development task has not been determined.

This is a partial display of the results of this week’s process (due to space problems, only partial results are displayed) :

序号	模块	功能	功能详细说明	
1	可持续性指南-王世政	<ul style="list-style-type: none">只能看	<ul style="list-style-type: none">网上搜索一些家庭（用电用水生活垃圾等）、社区内、出行方式等方面的可持续性指南列出内容，点开后可查看全文物业用户可以发布新的指南物业用户可以对指南进行删除，编辑	
	社区服务查询-刘欣然	<ul style="list-style-type: none">地图显示上门服务（分类）（上门服务预约）	<ul style="list-style-type: none">地图查询内容：健身器材、超市便利店、健身房游泳馆、老年活动中心、儿童乐园、照相馆影印馆、老年健康中心地图展示：将不同设施用不同的标志展示在地图上，用户可以通过标签选择只看某一类or所有，点击某个特定地点显示全景图（做不做都行）上门服务种类：送水、订报纸、水电维修上门服务预约：业主信息、上门时间、服务种类（水电维修：维修类型、具体问题）（有些信息直接展示，有些可以点开看？）	
5	社区教育资源-王世政	<ul style="list-style-type: none">电子图书馆gpt教育辅助	<ul style="list-style-type: none">业主用户可以使用（前置）电子书数据：爬取有价值的，完整的，电子书格式的图书分类整理：电子书按关键词（标签）进行分类，在分类下对书籍按时间进行排序检索功能：可以根据书名的部分字段来搜索书籍书籍下载：用户想要浏览的书可以下载，离线阅览（有精	

Figure 1: Project module introduction

六、非功能需求

- 可以列举产品营销需求、运营需求、财务需求、法务需求、使用帮助、问题反馈等
- 可扩展性
- nextjs框架
- Antd组件库
- Swr + axios请求库
- G2antv图表展示
- zustand状态管理
- flask框架
- Strapi
- 数据库不知道用啥

Figure 2: Frameworks, component libraries, etc. to be used in the project

2.5 week5

The team was divided into two groups to write the project proposal according to the details of the email published by the teacher. At this meeting, we discussed with team members and added some changes that needed to be made. The team members carried out the interface design and discussed the problems in the ER diagram. The following is the relevant display of the ER diagram of the group:

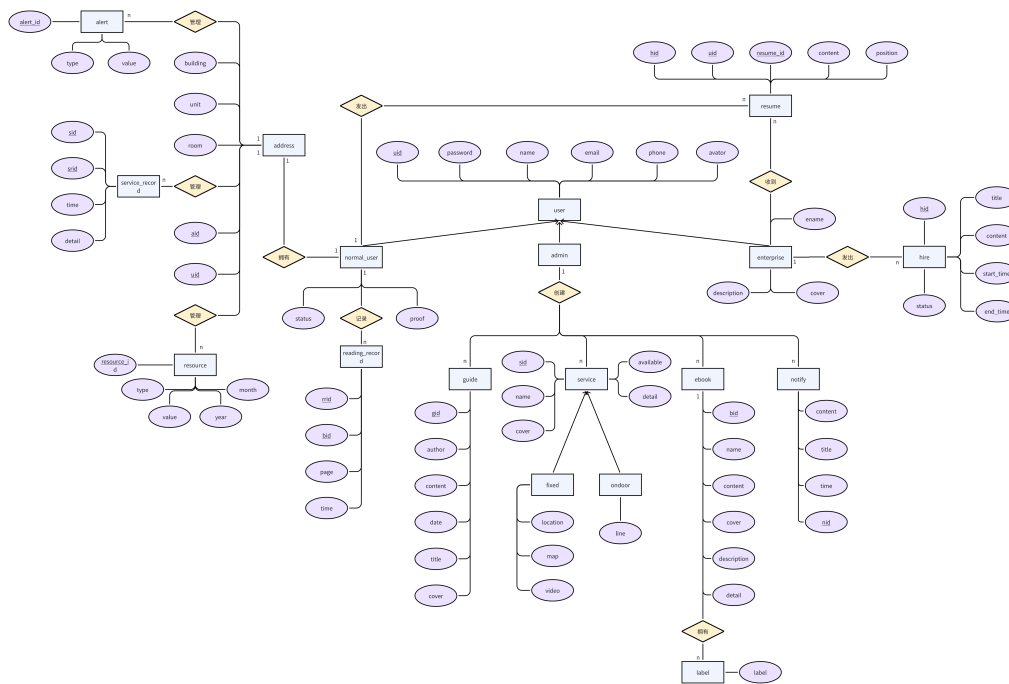


Figure 3: ER diagram presentation

In addition, the rest of the team also started the design of the interface and found some areas for improvement through discussion. Some members also designed the basic interface UI of the software. After you've designed everything correctly, start writing these interfaces. Here are the pages we completed:

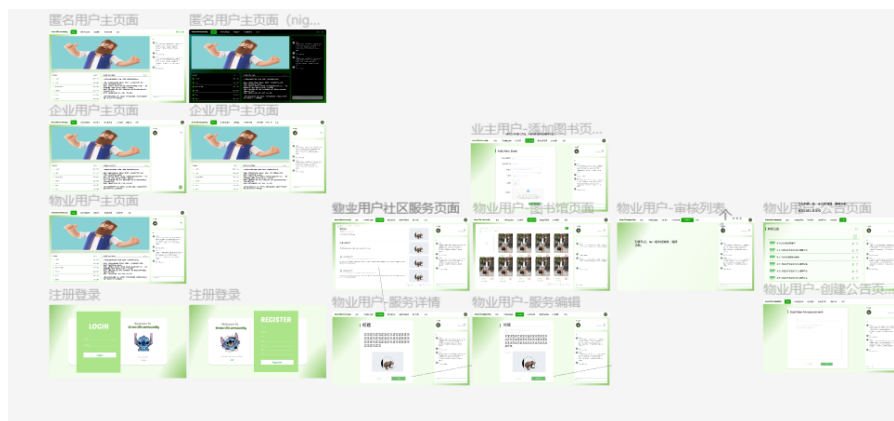
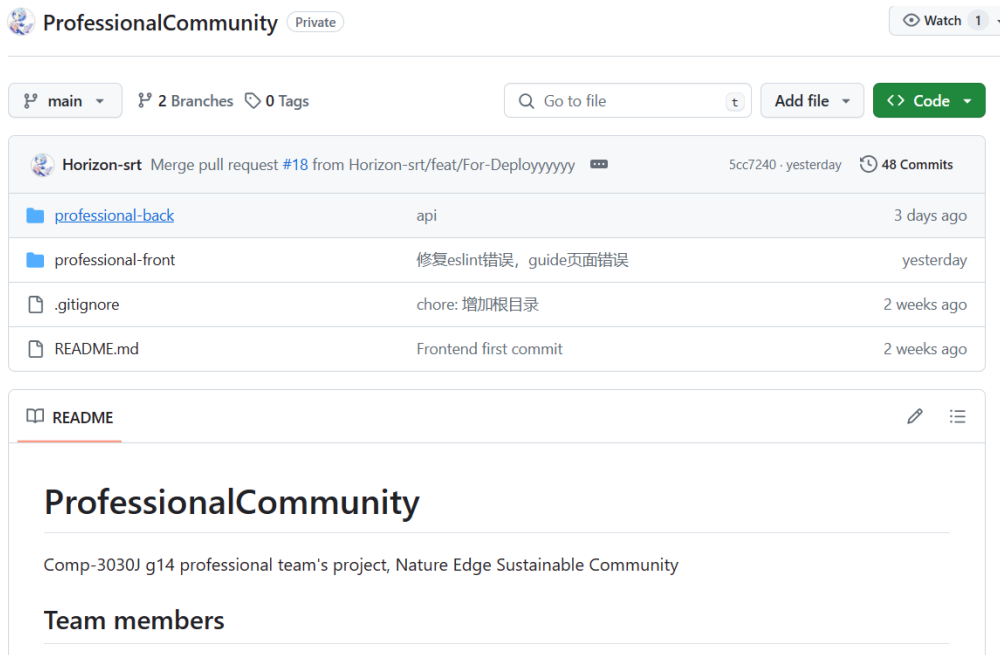


Figure 4: UI presentation

2.6 week6

Until now the progress team has mainly started the formal coding work. The team leader created a GIT repository and brought team members into the team to update the development progress in real time. Our team members also designed the route and started the front-end task based on the completed interface. The back-end work is expected to be configured and executed by the end of the week.



At the same time, the team members also defined some data and terminology, and updated the UI design of the various interfaces.

Here are the new pages added:

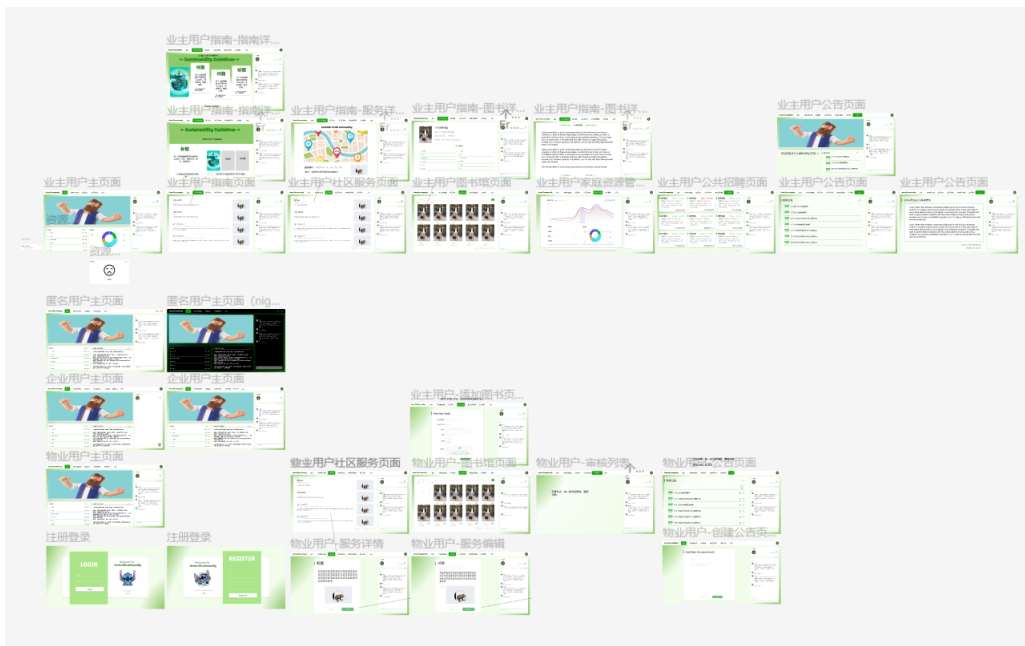


Figure 5: UI presentation

2.7 week7

Current project development progress: The team has basically completed the deployment of some major pages in the design draft, and realized the conversion from page to code. The deployment of all pages is expected to be completed by next week. Realize the function and jump from page to page, such as login and registration page function. At the same time, this week also updated some accessibility features, such as page theme switching function, home page navigation bar implementation. In addition to making progress in page deployment and functionality, the team is also focused on enhancing the user experience through various optimizations, and we are working on optimizing the performance and loading speed of the application. By carefully analyzing the code base and implementing best practices, we were able to significantly reduce load times and improve overall responsiveness.

2.8 week8

The development process and progress of results are continuously updated