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University of Ottawa

GNG 5300

**Assignment 2 report**

**Xu Gao 300349592**

Date: October 3, 2024

This project is a student management system based on Django. In this document, I will introduce about those functions and how to achieve it and about the challenges.

So, the first step of this project is to set up the project, I need to build the virtual environment. This is a basic step, I just need to create a folder and then use PowerShell, input command below:

1. python -m venv env
2. env\Scripts\activate
3. pip install Django
4. django-admin startproject student\_management (This command is build a project named student\_management )

After all those steps done, I just use command to push the basic project structure to github.

The second step I need to do is to Create a Django model, In this model, I need to define what date I need to store for this project.

For this step, I created an app first, because use app is easier to manage and extend in the future. And then create a class to store And I use \_\_str\_\_ to let the front end display students name instead of <Student object at 0x...>, the code screen shot and the result blow:

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图形用户界面, 文本

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The third function is create a admin interface, so that administrators can manage the system,

For this step, I create a admin account by using the command: python manage.py createsuperuser and then input email and user name and password, this project’s admin username is admin and password is Admin@123. The code and result are in the pictures:

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图形用户界面, 应用程序, 聊天或短信

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图形用户界面, 应用程序

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图形用户界面, 文本, 应用程序, 电子邮件

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The next step is Views and Templates, there are 4 things that need to be displayed, thus, in views.py, I create 4 classes and give those 3 classes templates.

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电脑萤幕画面

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描述已自动生成

图形用户界面

描述已自动生成

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图形用户界面

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Step 5 is form; I create a class StudentForm and judge the data that users input correct or not

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图形用户界面, 应用程序

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Step 6 Authentication

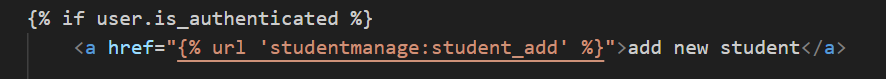
Django has the Authentication model django.contrib.auth to achieve login and logout. Consider that this is a student management system, I also add a function that if user did not login, he or she could not see any student’s name to protect students’ privacy. I also add Registration function, which could let user add new accounts.

手机屏幕的截图

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电脑屏幕的截图

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屏幕的截图

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The seventh step is search function:

图表, 文本

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The eighth step is Pagination, I set 5 students in a page and let users know total pages.

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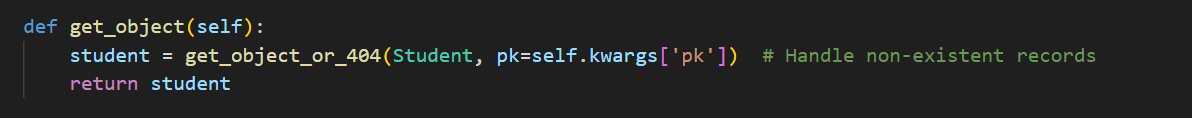
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The final step is Error Handling and Validation, in this step I build a 404 error page so that it could be displayed when error happened, And in order to test it I delate one student from admin page and then visit that student’s URL in the front end, this function for me also have a challenge that I did not solve because if I set DEBUG = True in Django settings file. I could not see the 404 page. But if I set DEBUG = False, then the admin page will lose the css.

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