



MANIPAL INSTITUTE OF TECHNOLOGY
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Information Technology Lab

Student – Teacher Dashboard (Django)

SUBMITTED BY

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April 2024



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Manipal
05/03/2024

CERTIFICATE

This is to certify that the project titled Student Teacher Dashboard is a record of the bonafide work done by Student Sujeet Sanjay Amberkar (Reg. No. 200905092) submitted in partial fulfilment of the requirements for the award of the Degree of Bachelor of Technology (B.Tech.) in COMPUTER SCIENCE & ENGINEERING of Manipal Institute of Technology, Manipal, Karnataka, (A Constituent Institute of Manipal Academy of Higher Education), during the academic year 2022-2023.

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Abstract

The aim of the project “Student-Teacher Dashboard” is to create a structured communication channel between teachers and students. It facilitates various academic and administrative functions, including notice dissemination, access to course materials, and display of marks. This report documents the project’s functionalities, steps of installation and limitations.

Introduction

The student-teacher dashboard is the one-stop solution for all the communication between teacher and student. Using this software, teachers will be able to share study material, manage marks and also publish notices for students.

File Structure

```
dashboard/
├── dashboard/
│   ├── urls.py
│   ├── views.py
│   └── settings.py
├── media/
│   └── course_material/
│       └── pdf/ # PDF files of notes
└── static/
    └── styles.css
└── student/
    ├── templates/
    │   └── student/
    │       ├── home.html
    │       ├── login.html
    │       ├── studentcoursematerial.html
    │       ├── studentnotice.html
    │       └── view_marks.html
    ├── templatetags/
    │   ├── __init__.py
    │   ├── form_tags.py
    │   └── youtube_filters.py
    ├── urls.py
    └── views.py
└── teacher/
    ├── templates/
    │   └── teacher/
    │       ├── home.html
    │       ├── login.html
    │       ├── teachercoursematerial.html
    │       ├── teachermarks.html
    │       └── teachernotice.html
    ├── templatetags/
    │   ├── __init__.py
    │   └── custom_filters.py
    ├── forms.py
    ├── models.py
    ├── urls.py
    └── views.py
└── templates/
    └── main.html
└── manage.py
```



Methodology

Project Structure

The project is structured into a main Django project named "Student-Teacher dashboard," encompassing two key applications: student and teacher."

- Student Application: Manages student interactions with the platform, including login, notice viewing, access to course materials, and marks review.
- Teacher Application: Handles teacher-related functionalities such as login, posting notices, uploading course materials, and entering student marks.

Implementation

Groups and Permissions

For Students:

1. **Login:** Secure authentication to access personal and course-related information.
2. **Notices:** View notices posted by teachers.
3. **Course Materials:** Access and download course-related materials.
4. **Marks:** View academic marks and feedback.

For Teachers:

1. **Login:** Secure authentication for accessing administrative interfaces.
2. **Post Notices:** Upload notices relevant to students.
3. **Upload Course Materials:** Share educational resources with students.
4. **Enter Marks:** Record and publish student performance metrics.

User Management

- 1) The "Dashboard" project employs a centralized user management system to maintain control ensure secure access prevent any unauthorized access and maintain the integrity of the records.
- 2) There is no signup page, The superuser will create the username and password and give it to students and teachers

Database Design

User Management

- 1) We are using the SQLite database to manage users and groups, which is facilitated through the auth_user and auth_group tables.

Teachers have an option to edit data but students can only view the data

Notices Table:

- 1) id: Primary key.
- 2) title: The title of the notice.
- 3) content: The detailed content of the notice.
- 4) posted_by: Foreign key linking to the auth_user table to identify the teacher.
- 5) created_at: Timestamp indicating when the notice was posted.

Course Material

This includes materials uploaded by teachers, such as chapter names, YouTube URLs, and notes in PDF format.

- 1) CourseMaterial Table:
- 2) id: Primary key.
- 3) chapter_name: The name of the chapter.
- 4) video_url: URL of the corresponding YouTube video.
- 5) pdf_file: FileField to store the uploaded PDF file.
- 6) created_at: Timestamp for when the material was uploaded.

Marks

- 1) Student (Foreign Key)
- 2) Marks Obtained
- 3) Total Marks

To manage migrations and interact with the database, Django provides the following commands:

- `python manage.py makemigrations`: Prepares migrations based on model changes.
- `python manage.py migrate`: Applies migrations to the database, structuring it according to defined models.

Results And Snapshots

The image displays three screenshots of a web application interface, likely a dashboard or login system, showing different stages of user interaction.

- Screenshot 1: Welcome to the Dashboard**

A screenshot of a browser window showing the URL 127.0.0.1:8000. The main content area displays "Welcome to the Dashboard" with two buttons below it: "Login as Student" and "Login as Teacher".
- Screenshot 2: Teacher Login**

A screenshot of a "Teacher Login" form. It contains fields for "Username" (with a blue border) and "Password", and a "Login" button. Below the form is a link "Go back to main".
- Screenshot 3: Welcome, teachernext!**

A screenshot of a dashboard for a teacher. It features a header "Welcome, teachernext!" and three dark grey buttons labeled "Add Notice", "Add Course Material", and "Enter Marks". At the bottom is a link "Go back to main".

Enter your notice here...

[Submit](#)

[Go to Home](#)

Add Course Material

Chapter name:

Pdf file: Choose file No file chosen

Video url:

[Upload](#)

[Go to Home](#)

Enter Marks

Student	Marks Obtained	Total Marks
raj	20	100
abhi	86	100
manali	34	100
sanjay	10	100
sarita	100	100

[Update Marks](#)

[Go to Home](#)

Student Login

Username:

Password:

[Login](#)

[Go back to main](#)

Welcome, raj!

[Show Notice](#)

[Show Course Materials](#)

[Show Marks](#)

[Go back to main](#)

Notices

Date	Notice
2024-04-03 10:37	Testing Notice after Vs Installtion
2024-04-02 19:53	I will upload lecture 3 soon
2024-04-02 19:51	I have uploaded 2 lectures
2024-04-02 19:51	This is just an introduction Message

[Back to Home](#)

Course Materials

Array



Sorting



Sorting

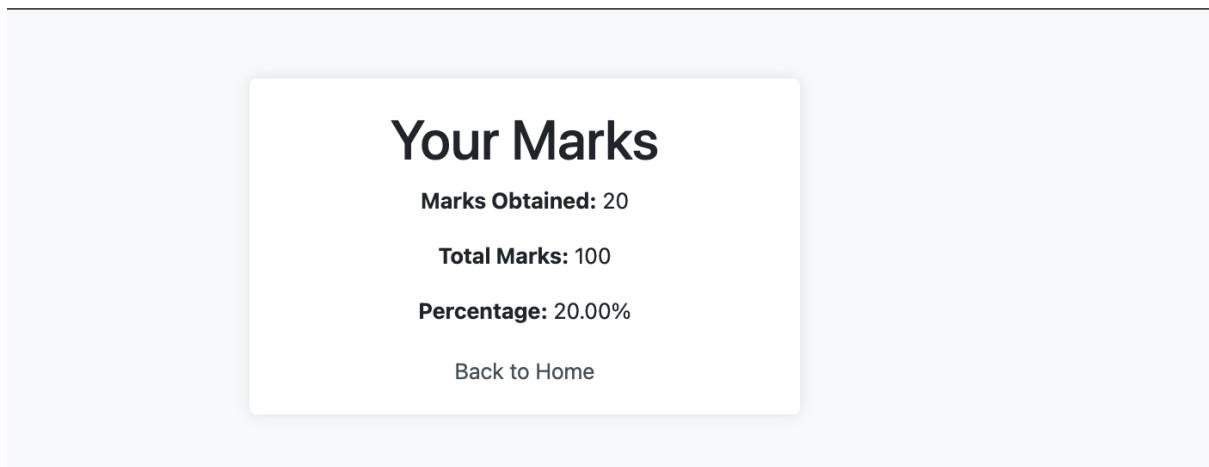


Visual Studio Code Installation



Screenshot

Back to Home



Django administration

Site administration

AUTHENTICATION AND AUTHORIZATION

Groups	+ Add	Change
Users	+ Add	Change

WELCOME, **SUREET**. VIEW SITE / CHANGE PASSWORD / LOG OUT

Recent actions

- teachernext User
- + teachernext User
- sunita User
- + sunita User
- sanjay User
- + sanjay User
- manali User
- + manali User
- test_teacher User
- + test_teacher User

Conclusion

The "Dashboard" project represents a significant step forward in simplifying the formal communication between teachers and students.

By leveraging the power of Django we are able to create a user friendly platform to share study material, notices and displaying maths

Future Directions

- 1) **Feature Expansion:** More features can be added to this project like daily attendance and a way for students to submit their assignments
- 2) **Use Media- Query** to make give better user experience of mobiles

Code :

Github : https://github.com/sujeetamberkar/it_Project_Dashboard