

System and Software Lab Project Report

Course Handling and Recommendation Website

Django Website Implementation

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1 INTRODUCTION

For our Software and Systems Course Project, we developed a Django website aimed at serving as the academic portal between students and teachers. Students would login as users and be subscribed to their official courses to avail the announcements and assignments from the teachers, and to allow for easy submission of completed assignments. The teachers would handle their particular courses, getting course statistics and submissions easily. In addition would be a course and event recommendation software available to all the users.

2 DESCRIPTION

2.1 BACKEND : ADMIN INTERFACE

On the Django framework we created class objects for users of different categories : student and teacher. The students have their ids, pictures are mapped to courses, assignments and interests. The teachers with their ids are mapped to courses with privileges to add assignments and announcements. The admin site was created to help an admin to easily sort through database manually.

2.2 STUDENT USER INTERFACE

Written using HTML tags and JavaScript, the student side front end is a user friendly yet optimal interface. The functionality provided to input buttons for front end to communicate with the database is using SQL code through the Django migrations. The student user side has the following features:

- A login page made using Django forms.
- Profile creation page : Here one added his details, his photo, and most importantly his interests, which would later help in course recommendation.
- Course Selection Page : Interface to subscribe to courses.
- Home Page : Displayed the list of courses he had subscribed to, with the appropriate functionalities (to enter course pages and sort courses) and information.
- Course Page : The view as seen by a student when he selects a course. It displays all the course information, the announcements, the assignments and the corresponding submission portal links. These links led to sites programmed to accept submissions and make them available to the teacher.

2.3 TEACHER USER INTERFACE

The teacher user has many privileges over the website and its functionalities. The teacher user side has the following features:

- A login page made using Django forms.

- Profile creation page : Here one added his details, his photo, and most importantly his interests, which would later help in article recommendation.
- Home Page : Displayed the list of courses he is managing, with the appropriate functionalities (to get student information) and other information.
- Course Addition Page : An interface to put in all details necessary to create a course object. This allows the teacher to add to the courses available to the students.
- Course Page : The view as seen by a teacher when he selects a course. It displays all the course information, the announcements, the assignments and the functionalities to create new announcements and assignments (with submission links). An additional link leads to the database containing all submissions from the students.

2.4 COURSE AND ARTICLE RECOMMENDATION INTERFACE

One of the new features we add to the common academic interface. Based on the interests as selected by the students, courses would be displayed to students according to them. The courses were given tags while creation and highest match with the interests selected by the student users would give higher priority while being listed on the Course Selection page of student interface.

Another page was the article page, available to both students and teachers. Articles were web scraped from popular engineering institutions' feed to create a customized article feed for every user. The articles to be displayed were chosen according to the interests selected by the user during profile creation.