



DEVATHON 2021

Web Dev :

WS1 :

Create a portal-like system that takes the complex information from faculty like publications, seminars, research interests. In addition to that, create a UI where one can track all the faculty with appropriate filters like branch, course, or specialization.

(Tech stack preferred- MERN)

Requirements:

- Faculty can create a new faculty profile
- Experience, publications, education are supposed to contain multiple details nested inside.

Ex. Education [{

1. Degree

2. Subject

3. Year

4. College

}]

- Faculty can update their profiles (should be able to update the old data)
- A visitor is able to check all the faculty profiles
- Visitors can apply filters

WS2:

Create an Online Reporting Module for M. Tech students

Roles: Student, wsdc admin

Objectives:

Student Requirements: He/She has an Application ID using which he/she would fill a form.

In the form, the minimum details can be

Name

Birthdate

Aadhar/Passport
Address
Gender
Department
Specialization
Category(SC-ST, OBC etc.,)
PWD?
Documents(1 form field is enough to take input .pdf)
Passport Pic(.jpg etc.,)
Notes

Here the department and specialization must be dynamically loaded. The respective Dropdowns must be dynamically loaded. i.e. if Dept is Physics then only Physics related specializations must load.

Admin:

If a student has applied, then the admin can view the application.

There will be 3 pages for it pending applications, accepted applications and rejected applications.

Initially when a student submits the form, his/her data arrives at pending applications, then based on the action of the admin it can go to be rejected or accepted. If rejected, the admin must input a reason. And the respective status(accept/reject) along with the message and reason will be sent to the student.

If a student applied, then he or she cannot apply again if their status is pending or accepted. If their status is rejected, only then can they apply again.

Also

Only accepted students can be allotted a registration number, which will be manually inputted by the admin. Make checks that the registration number is unique.

i.e. first accept button is clicked, (status=ACCEPT) then only allot registration button will be functional. And respectively, the registration number can be allotted.

WS3 :

Scholarship Portal :

Intro : There are endless scholarships coming out throughout the Academic Year.

These scholarships are circulated among the student groups over WhatsApp and through ROs. We lack a proper channel of communication between the admin and the students, through which many students miss out the opportunity of availing the same.

Objective : Our main objective is to establish a proper system which does the following goals :

- 1) Students are able to see all the scholarships rolled out by the admin
- 2) A student can easily apply for most of the scholarships using the single button functionality
- 3) Once applied, the Student can be able to track the application of the scholarship.

Admin Side :

→ Add a scholarship with the following fields :

- Instructions
- Opening and Last Date to apply
- The students who can apply (include fields like caste, program(PhD, B tech , M tech), Department, Specialization(in case of Mtech), Gender, Min CGPA,
- If it's an external scholarship, provide the link to apply

→ Check the applicants for a particular Scholarship :

- Accept the right applicants
- Reject the wrong ones

Student Side :

- Able to see the scholarships posted
- Apply only for which they are eligible for
- Provision to upload the required documents
- Track the application of Scholarship

WS4:

Web app where all the notifications like announcements, timetables, sitting plan, etc. along with attachments can be posted, basically an online display board for departments/ or in general.

Admin view:

Has authentication system

Can add the display item, categorized according to different profiles/courses etc. Can be purely on students' assumptions.

Student view:

Has authentication system

Profile of student to get personalized announcements(like a b tech student should only get announcements related to b tech and a particular branch student should get only that branch related notification)

Has a display board view of all items.

Note: proper wireframes/ mockup screens to be developed

Bonus points for making the UI look good and more responsive.

WS5:

In our college, there is currently no platform for connecting students and faculty. A platform/portal where students may post their projects, communicate their issues, contribute to projects, assist in academics, offer new ideas, and simply join together for any task. This will aid students in their overall growth and educate them about current curricular advancements, among other things.

You know how you've always wanted to ask a question during a lecture, but were too timid or frightened to do so because you were concerned the question would be dumb, or your buddies would laugh at you. Could we also solve this issue?

Every new project, even if it's only an idea for a project or a solution to a basic arithmetic problem, should be rewarded with some points or credits (Like upvotes in Quora). We could gamify everything and make it a lot more exciting this way.

Requirements:

- Students can post their projects
- Students can communicate with other students and faculties for discussion
- It should display current projects of a student, issues raised by him/her, and others should be able to see an option to contribute & assist.
- A channel to ask doubts from faculties
- An option to upvote/support on each of the displayed projects

NOTE: Brownie points for design of the system, selection of appropriate libraries and creativity.

WS6 :

Create a Medical Record System for the institute dispensary.

Student :

Create a master database having the medical records and basic information about the student. It shall be filled by the student at the start(once).

Appointment : If a student has to visit the institute dispensary, provision to book an appointment by filling a form.

In the Form while booking appointments show the availability of the time slots for the particular day.(Brownie points : Good UI)

Receptionist :

Maintain the student record(part of the master database) after the doctor appointment is over.

The receptionist will set the time slots for a particular day, which shall be shown in the student appointment form.

View all appointments for a particular day

Doctor :

View the medical record of the student who came for the appointment

View the appointments booked for him on a particular day

WS7:

Placement Diaries

- a. Develop Two pages/Two Views, one for students and other for TNP
- b. For student page:
 - i. Student Signup (only NITW students) and authentication
 - ii. Anyone can post their placement experience and TNP should approve the post, and if the post is approved everyone can see it
 - iii. Include a button for likes
 - iv. Filter the post based on companies and branches
 - v. Optional: Study about XSS attack and try to avoid it
- c. For TNP View:
 - i. Create a separate portal of TNP
 - ii. TNP Signup (only NITW students) and authentication
 - iii. Approve the post or reject it
- D. Automatic Testing :

Use of Selenium for automated testing of the entire web application.

Please note that all the parts are compulsory to develop to complete the problem statement.

App Development :

A1 :

Create a no-due clearance module NITW app to help students get a clearance from various departments in order to get a final clearance certificate.

The app should contain 3 views :

Student view

Each student should login using their wsdc credentials. He/she should be able to view all his/her dues from the hostel office and library.

Librarian view

Librarians should have a different login page and he/she can check the books that are to be returned and can give the clearance based on that.

Hostel office view

The warden should have a different login page and he/she can check the dues that are remaining for a particular student and can give the clearance accordingly

A2:

As in online mode we are getting a lot of information through a single WhatsApp group which is not having proper segregation of notices, study materials, that too for multiple subjects and information other than academics. So this bunch of information creates a mess where there is no proper filter, which may cause loss of important information.

Problem Statement: Create an app supporting multiple groups/channels with restricted access as per role which serves as a platform to share notices, study materials, poles, and other stuff. (Extra brownie points for creativity)

The app functionalities:

1. Create users based on different roles.
2. Assign role-based permissions for read-write access.
3. Create groups and for each group the ability to create multiple channels.
4. Add/remove users from the groups.
5. Invitation for joining groups.
6. File sharing.
7. Notifications for important updates.

A3 :

Create an App where students can anonymously vote candidates for the different roles

Admin View:

can add roles with eligibility

Can see and approve/decline the requests that came from the students

Student View :

Have unique token, generated from registration number

Request for a particular role if only the requirements were satisfied, thereafter fills his profile

App should also have a secure authentication and also for forgot and change passwords

Note: proper API documentation along with database schema.