**Automating Elective Processing**

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**Abstract:**

A dedicated website which has the features of open electives course allocation with specific requirements to the allocation admin and preference submission to students. At present the existing system is unmanageable which involves a heavy manual procedure which is submitting hard copies to the representative and manual allocation of courses by the allocation admin. It consists of course and student controllers to work on the website which takes data and allocates open electives to the students automatically according to their preferences. To integrate these processes onto the web by building a website , we are a proposing a website, which accomplishes the aforementioned tasks simply through mouse clicks. We would like to build a common platform which integrates both the tasks of course request and course allocation performed by students and course allocation respectively.

**Stake holders**

1. Students
2. Teachers
3. Admin
4. Team Members

**Modules**

1. REGISTRATION – New entries are required to register into our software.
2. LOGGING IN/OUT – Students and Teachers can log in to our software to choose/check the electives
3. CHOOSING ELECTIVES – Students can proceed to chooses the electives according to the given requirements.
4. CHECK ELECTIVES – Teachers can keep track of the choosing process.
5. TRACK ELECTIVES – Students can keep a track of the registration of their electives.
6. CHANGE ELECTIVES – Students can change their elective until a given date.

**Table (Master/Transaction)**

1. STUDENT (MASTER, PRIMARY KEY-roll no) – contains all the student information.
2. ELECTIVES (MASTER, PRIMARY KEY-course code) – contains information on the different electives provided.
3. TEACHERS (MASTER, PRIMARY KEY – tech no) – information on the teachers teaching the electives.
4. DEPARTMENT (MASTER, PRIMARY KEY – dep no) – information on different departments and which electives belong in it.
5. TEACH-ELE (TRANSACTION, FOREIGN KEY- course code, tech no) – join table between ELECTIVES and TEACHER.
6. SELECTION (TRANSACTION, FOREIGN KEY-roll no, course code) – information about selection of electives.

**Reports**

1. PROJECT STATUS REPORT – shows how well the project is advancing.
2. TIME TRACKING REPORT – shows how much time is being spent on different tasks.
3. OVERALL PROJECT REPORT – shows if all the project objective and milestones are being met, also includes different tasks being completed.

**Assumptions:**

1. Web based software for Automated Elective Processing
2. Mobile app for Students
3. Course and Credit requirements should be met.
4. A system to track the electives chosen by each student

**Requirements:**

**Students:**

1. The student logs into the portal and it displays the elective preference page.
2. The preferences page displays the available electives with the number of seats remaining and the relevant course information and pre-requisites.
3. The students can reserve the desired elective on the basis of the availability of seating for a particular course.
4. Students would be provided with their elective, batch (if any) and their respective batch instructor at the end of the selection phase.
5. Students will be able to change the elective in a given time slot

**Faculties/Staffs:**

1. The faculty can login to the faculty portal.

2. Faculty can access the list of students who choose the electives.

3. Faculty can view the finalized list after the end of selection window.

**Software:**

* Internet Browser (Google chrome, Safari, Firefox)

**Hardware:**

* 4GB RAM
* Usual Computer setup
* High speed internet connection

**Epics:**

**USER**

As a new user I want to register,

* Design registration page. Implement using HTML & CSS.
* Get new user info.
* Store info in DB.
* Go back to login page.

As a new user I want to login/off anytime,

* Design login page. Implement using HTML, CSS & JS.
* Get info from user.
* Check info with DB.
* If successful, go to homepage,
* If not, stay in login page with FAILED message.

As a user if I forget password,

* Get last password.
* Check with DB, if successful keep same password.
* If not, verify with email.
* Get new password.
* Store new password in DB.
* Go back to login page,

As a user if I want to delete my account,

* Design login page.
* Get info from the user
* Check info with DB
* If successful, delete the account
* If not, stay in login page with FAILED message.

**STUDENT**

As a student I want to see the courses available & their info

* Design course Info page. Implement using HTML & CSS.
* Connect to DB & query to fetch the info.
* Display data. (Including pre-requisites & faculty).

As a student I want to choose my electives,

* Design elective cholce page & form using HTML, CSS & JS.
* If valid, form is accepted & Info Is stored in DB.
* It invalid, display messages accordingly.
* Submission confirmed message is shown.

As a student I want to track course registration.,

* Design track page using HTML & CSS.
* Connect to DB & query to fetch the info.
* Display data. (selected courses)
* If irregularity, complain form can be filled.
* Complain form is forwarded to admin.

As a student if I want to change my elective.

* Design page using HTML & CSS.
* Get info on previous allocation.
* Get info on new elective.
* Display new elective information.
* If eligible, redirect to elective choice page.

**TEACHER**

As a teacher I want to see the courses available.

* Design course info page. Implement using HTML & CSS.
* Connect to DB & query to fetch the info.
* Display data.

As a teacher I want to see course info.

* Design course info page. Implement using HTML & CSS.
* Connect to DB & query to fetch the info.
* Display data. (including syllabus, CO's, PO's pre-requisites etc)

As a teacher I want to view students choice list.

* Design list page using HTML & CSS.
* Connect to DB & query to fetch the info.
* Display data. (different tables).

As a teacher I want to evaluate about a student’s performance.

* Design a page using Excel tool.
* Enter the marks for each review.
* Calculate the marks and give feedback.

**DEPARTMENT**

As the dept, I will set the availability for a course.

* Design page. Implement using HTML & CSS.
* Connect to DB & query to fetch the info
* Count is given for each course. (depends on number of teachers)
* Info is sent to admin.

As the dept I will set criteria for electives.

* Design page & form using HTML & CSS
* Connect to DB & query to fetch the info.
* Set criteria such as CGPA, pre-requisites etc
* Query the info to DB.
* Info is sent to admin.

As the dept I will register the students for electives..

* Design track page using HTML & CSS.
* Connect to DB & query to fetch the info.
* Checking for eligibility by filtering.
* Eligible candidates are registered.
* Acknowledgement via message in track page.

As the dept I will issue the final list.

* Design page using HTML & CSS.
* Connect to DB & query to fetch info.
* Display data as final list. List is sent to teachers and students.

**ADMIN**

As the admin I will release info on the electives.

* Design page. Implement using HTML & CSS.
* Connect to DB.
* Check with department.
* Changes are made to DB, if any.
* Acknowledgement is sent to dept.

As the admin I want to re-allocate for any changes.

* Design page & form using HTML & CSS.
* Connect to DB.
* Check for availability and eligibility.
* If yes, changes made to DB and student is registered for new elective
* If no, no changes and message is sent to student.

As the admin I want to issue elective allocation

* Connect to DB & query to fetch the info.
* Registration table is sent to dept and teachers.
* Table is modified for any re-allocations.
* Changes are made to DB, if any.
* New table is sent to dept and teachers, if needed.

As the admin I want to rectify complains.

* Design page using HTML & CSS.
* Connect to DB & query to fetch info.
* Rectify frequent issues with pre-described steps.
* New issues are reported to department.