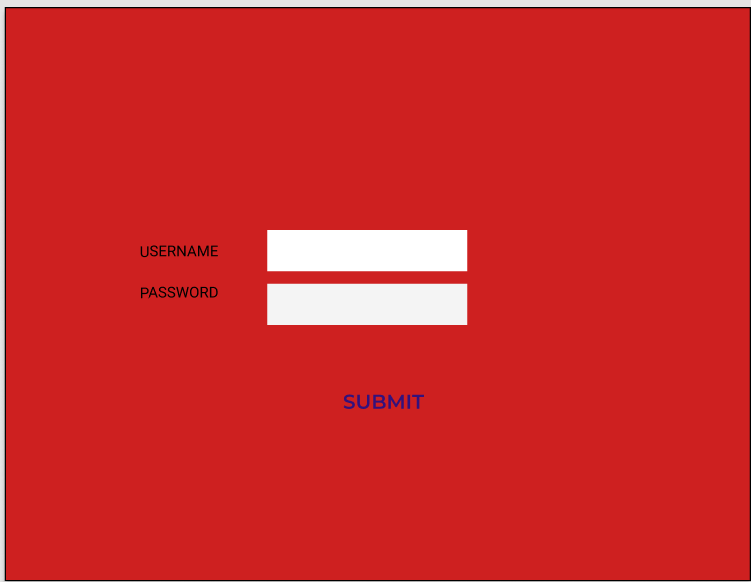
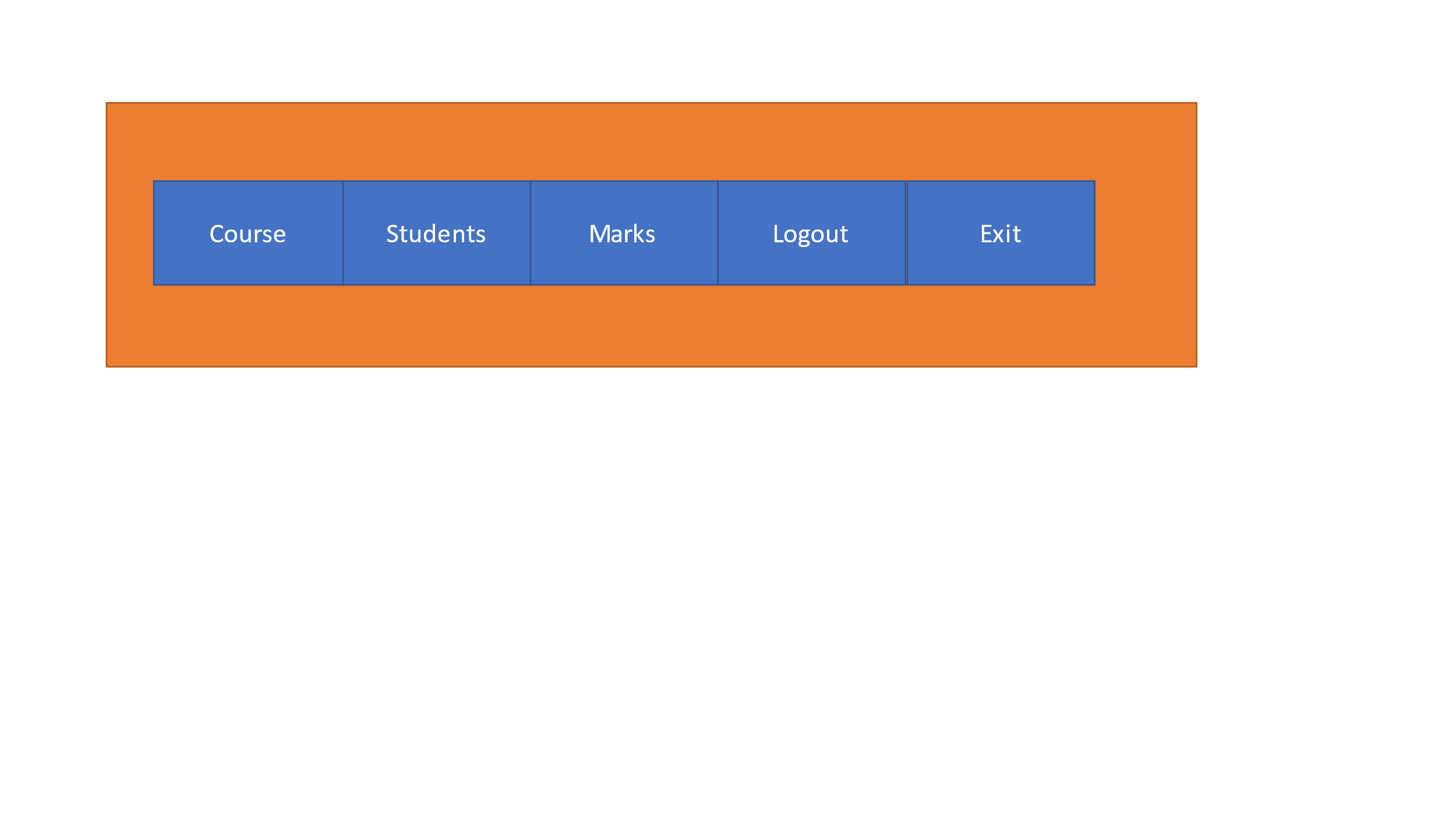
**Criterion B: Design**

Prototype of the system designed for the client

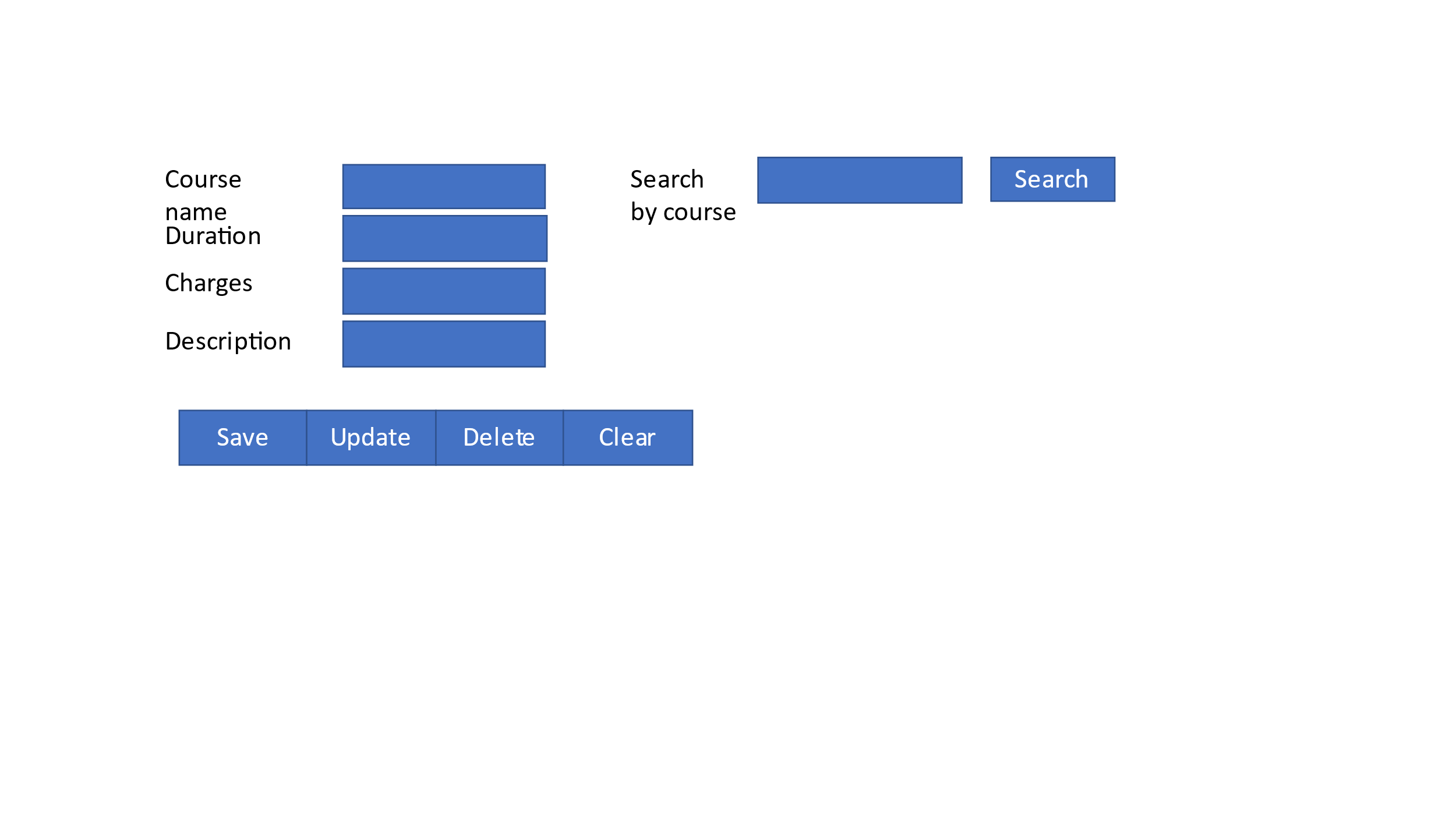
1. Login form to check if the user is authorised or not



1. After the user logs in, he or she has to select a tab they want to access

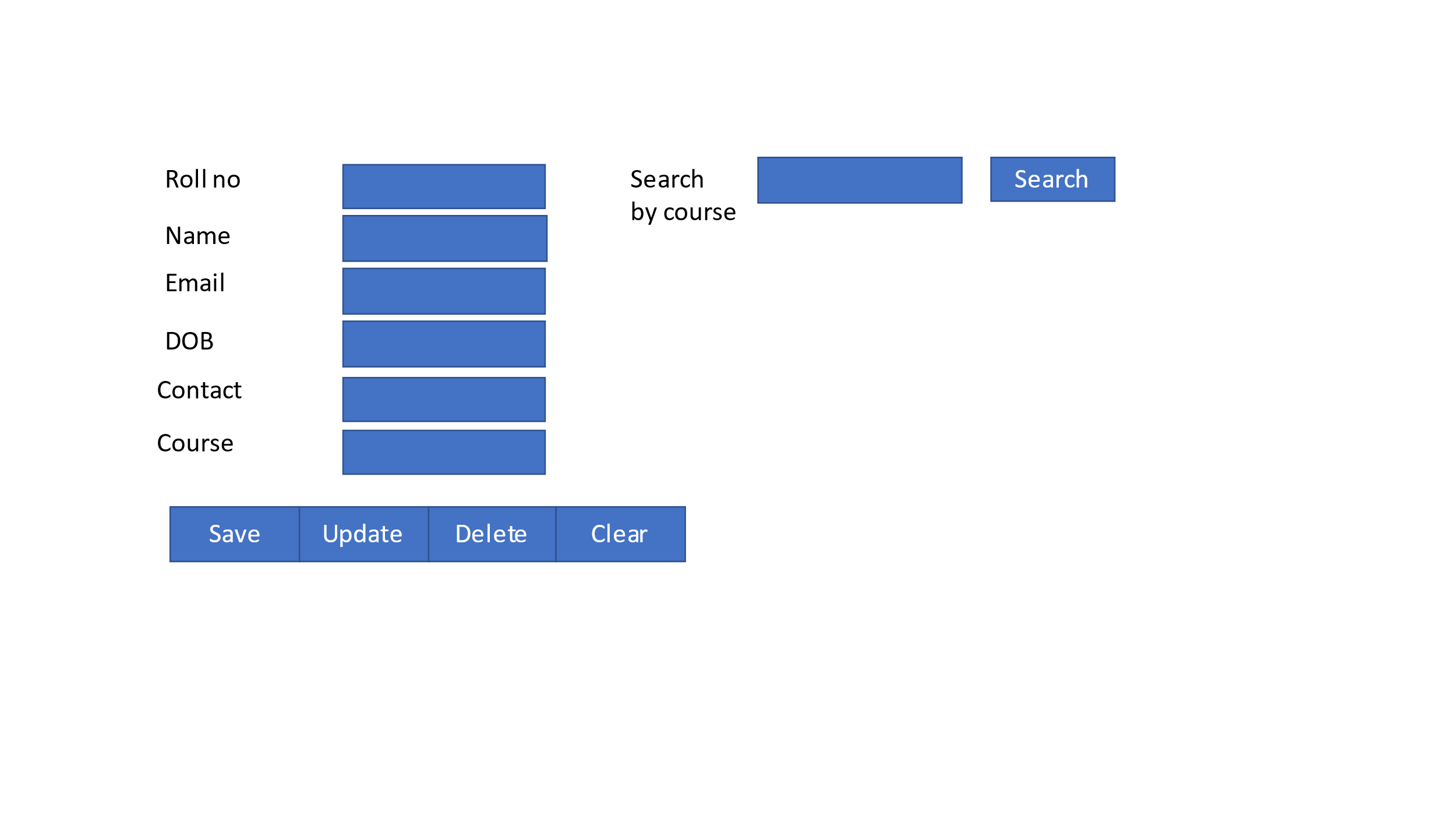


When the user clicks the Course Button the following output is seen

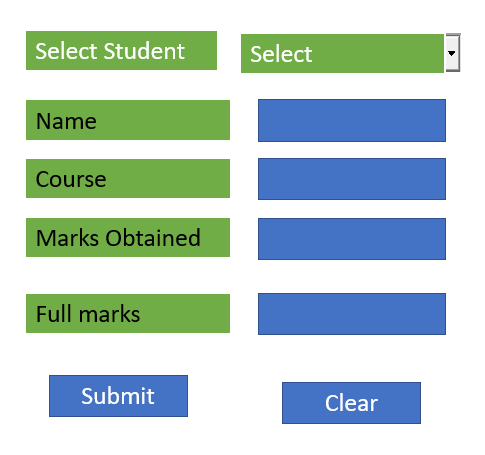




If the user clicks on the student’s button



If the user clicks the Marks button

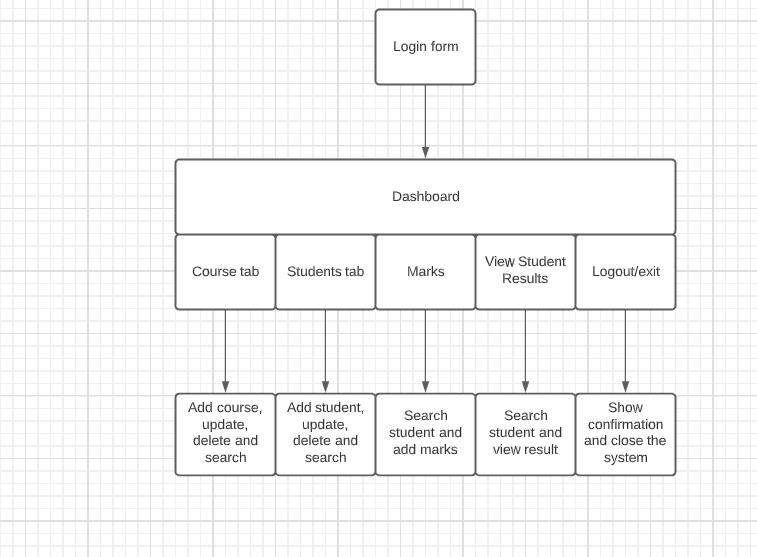


After showing the prototype to the client he suggested me some features which he wanted me to add those were as follows:

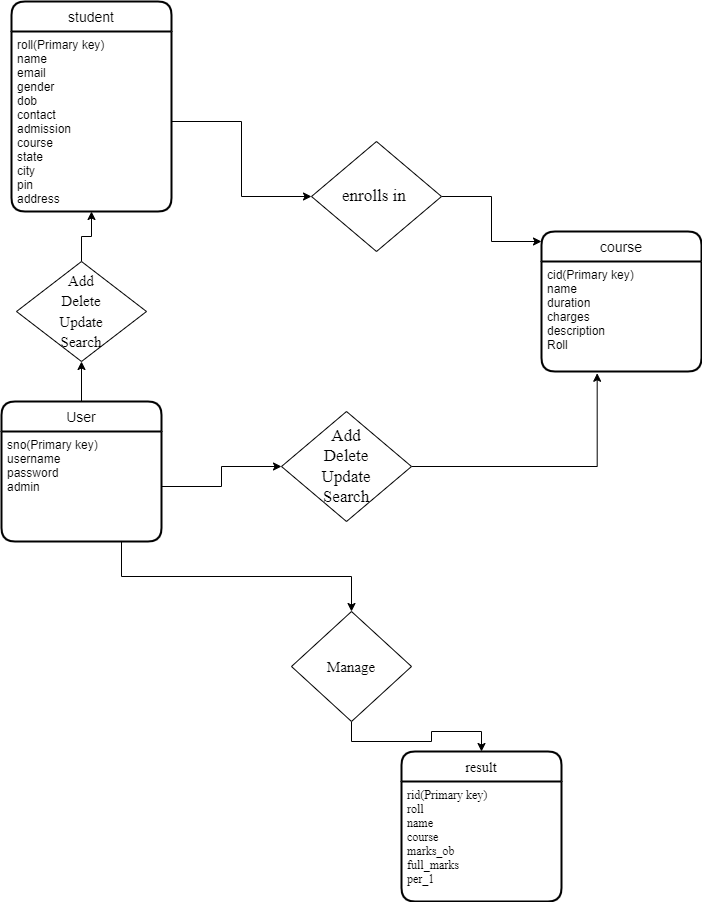
* Add a grid view under both the course and student tab
* Add more entry fields to the student tab like State, City, Admission, and Pin
* Two different options for login, one for the client and another for a teaching assistant who can add, update and search the course but cannot delete any entry from any tab
* Add Another option of view marks that will display the marks details and other important information.

According to the changes that were suggested to me by the client I Included them in my final project through VSCode(IDE).

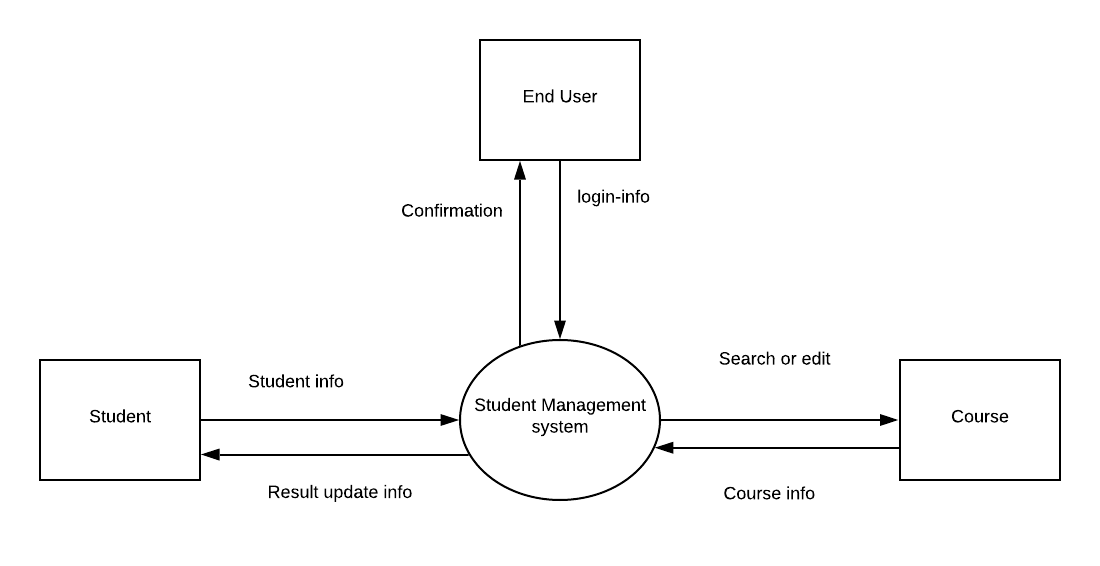
**FLOW CHART**



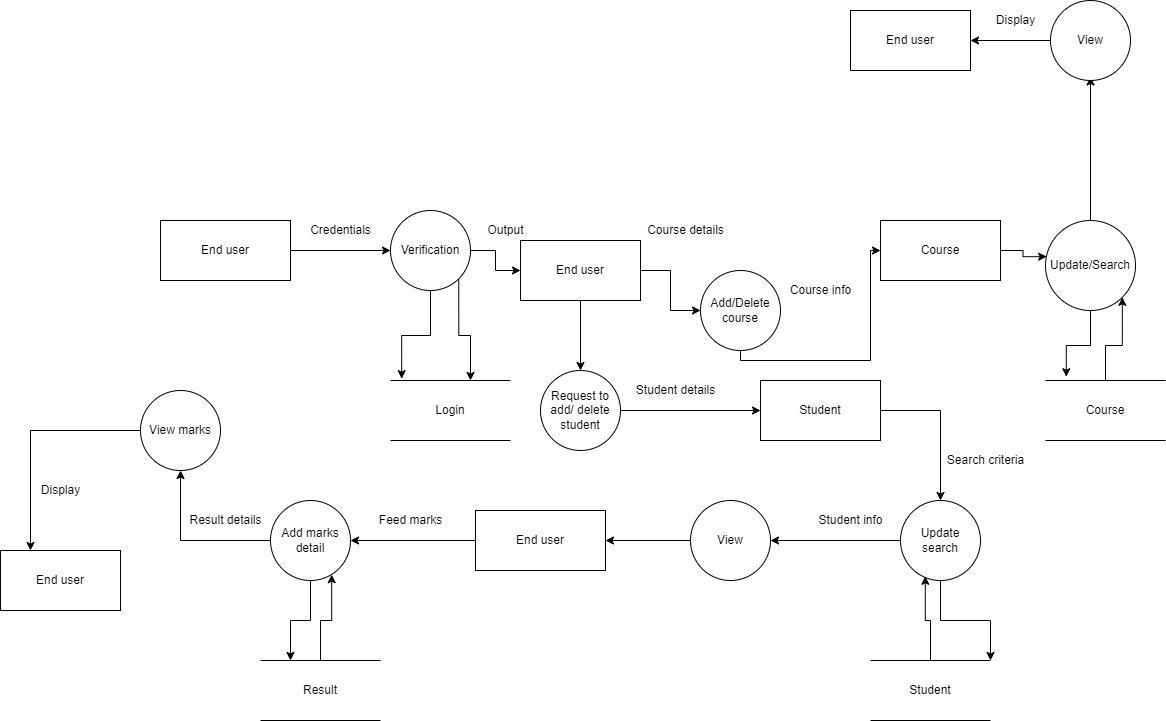
**ERD**



**Level 0 DFD: Student Management system**



**Level 1 DFD: Student Management System**



**Pseudocode and Algorithms**

**Login functionality pseudocode**

Login(Username, Password)

If Username=’Dayanand’ AND Password=’\*\*\*\*\*’

Show Dashboard of the system

Else

Show error dialogue box

End if

End Login

**Algorithm**

* Login procedure has two values username and password
* User will enter the username and password
* These entry will be validated with the original source of data
* If the entries are similar to the data present in database then and the user will be able to login

Otherwise an error message will be displayed

**Update function pseudocode**

Update(user\_data)

T1= Textbox.get() //get function will fetch the value from the textbox

If(T1=””)

Show error message

ElseIf T1=Roll\_No //Rollno being non editable

Textbox disabled

Else

Run the update query

End Update

**Algorithm**

* This function will update existing data
* If the textbox entry is blank an error message will be shown on screen
* But if we try to edit the roll number the textbox will be disabled
* If we the data we want to update the function is going to fetch the required record and the update query will be executed

**Search function pseudocode**

Search(C\_Name or Roll\_no)

Con=DB Connection object

Loop while(Con.eof()) // eof is the end of file

If (C\_Name=Course or Roll\_No= Roll)

Fetch the appropriate record

Delete previous record from the panel

Display appropriate record

else

Display nothing in the panel

Endif

End loop

End Search

**Algorithm**

* This function will search a data according to the user’s entry
* If the data entered corresponds to the entry in the database the user will be shown the record accordingly
* But if the user enters a wrong data the panel will go blank
* And if the panel is left blank and search button is clicked nothing will happen

**Table Schemas**

* Course Table

| **Field Name** | **Data Type** | **Description** |
| --- | --- | --- |
| **Course Id(cid)** | INT | Unique Identification given to each course |
| **name** | VARCHAR | Contains full name of the course |
| **duration** | VARCHAR | Contains full duration of the course. |
| **charges** | VARCHAR | Contains the fees of the course |
| **description** | VARCHAR | Contains a brief description of the |

* Login Table

| **Field Name** | **Data Type** | **Description** |
| --- | --- | --- |
| **Serial number (sno)** | INT | Serial number of the two users who will use the data |
| **username** | VARCHAR | Contains the usernames |
| **password** | VARCHAR | Contains the passwords |
| **admin** | VARCHAR | Contains the admin number which can be 1 or 2 if 1 the user will be able to login and delete the data if 2 then the user won’t have this privilege. |

* Result Table

| **Field Name** | **Data Type** | **Description** |
| --- | --- | --- |
| **roll ID (rid)** | INT | Unique ID given to each student is fetched in this column |
| **roll** | VARCHAR | Fetches the roll number assigned to the student |
| **name** | VARCHAR | Fetches the name of the student |
| **course** | VARCHAR | Fetches the name of the course student is enrolled in |
| **Marks\_ob** | VARCHAR | Contains the marks obtained by the student |
| **Full\_marks** | Varchar | Contains the total marks of the test |
| **Per\_1** | VARCHAR | Contains the percentage of the student. |

* Student Table

| * **Field Name** | **Data Type** | **Description** |
| --- | --- | --- |
| **roll** | INT | Stores the Roll no of the student |
| **name** | VARCHAR | Stores the name of the student |
| email | VARCHAR | Stores the email of the student |
| **gender** | VARCHAR | Stores the gender of the student |
| **dob** | VARCHAR | Stores the student’s date of birth |
| **contact** | VARCHAR | Contains the contact number of the student |
| **admission** | VARCHAR | Contains the admission date of the student |
| **course** | VARCHAR | Fetches the list of courses so that the student can be enrolled in any course after selecting it |
| **state** | VARCHAR | Stores the state in which the student resides |
| **city** | VARCHAR | Stores the city in which the student resides |
| **pin** | VARCHAR | Stores the pincode of the area where student lives |
| **address** | VARCHAR | Stores the address of the student |

**Test Plan:**

| Linked with  success criteria  1  A login form with 2 radio buttons to login one for the main admin and one for the second user | **Correct Input**  Select the user type  Username:’Dayanand’  Password: 123  Click login button  Next page opens  **Incorrect Input**  Username:’Dayanand’  Password: 333  Click login button  Following message is displayed:  “Invalid username or password message is shown”  Incorrect Input  Username:\*Blank\*  Password:\*212233\*  “Please fill all the fields” message is shown |
| --- | --- |
| Linked with success criteria 2  Submit button click event is imposing:   * + Verification of ID and password is done   + If either of the fields is kept blank appropriate error message is generated   . | **Correct input:**  **Username=”Junior”**  **Password=”junior”**  **After clicking the submit button the credentials will be verified:**   * **If both the credentials are correct then the dashboard will be displayed** * **no tab will give the junior admin the rights to delete a record** |
| Linked with  Success criteria  3  The course tab is used to manage the course details | After clicking the course button the course tab opens |
| Linked with success criteria 4  The student tab is used to manage the student details | When the user clicks the student button a course tab must be opened after the click event |
| Linked with success criteria 5  The marks tab is used to manage the mark details | When the user clicks the Marks button a student tab should be opened |
| Linked with success criteria 6  The view student result tab is used to display the result on the basis of the student’s Roll  No. | Correct Input  When the user clicks the view student results button and types the roll number and then clicks search then the marks are displayed |
| Linked with success criteria 7  Save Button should add the data when clicked | Once the user enters the details and clicks the save button then the data will be saved and will be reflected |
| Linked with success criteria 8  For superuser, the Delete button should erase the data when clicked | When the super user clicks the delete button the data will be erased |
| Linked with success criteria 9  Junior user cannot perform the delete action. | If the user logs in using the credentials of junior admin then the delete button won’t be visible |
| Linked with success criteria 10  The update button will make any changes in the data when clicked | Correct input  Enter:  Course name: \*for example\* German A1 level  Duration:\*for example\* 5 months  Charges\*for example\* 5000  Description\*for example\* German beginner level course  Click update:”Course added successfully” message should be displayed  Incorrect Input  Enter:  Course name: \*If blank\*  Duration:\*for example\* 5 months  Charges\*if blank\*  Description\*for example\* German beginner level course  Click update: ”Error all fields are required” message should be displayed |
| Linked with success criteria 11  Clear Button will hide all the data and present blank entry fields when clicked | When the clear button is clicked then all the entry fields are cleared and become blank |
| Linked with success criteria 12  Search button should fetch and show the details to the user when it is clicked  Linked with success criteria 13  Logout button should log out the user from the application  Linked with success criteria 14  Exit button will close the application | When the user clicks the search button on any tab the details should be displayed on the screen  When the user clicks the logout button the user is logged out and the login page is displayed  The exit button will close the application once it is clicked. |