Software Requirements Specification (SRS) Document

Project Title : Mobile Interface for Leave Requests / Approvals
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Brief problem statement :

The current IMS portal does not have a mobile version, which restricts users from accessing crucial features like Leave Application requests, Travel requests, Advance requests, Attendance, and Transcript, on their mobile devices. This limitation adversely affects user experience and convenience. Consequently, there is a necessity to create a specialized cross-platform mobile application for IMS, aiming to enhance accessibility and streamline the effective management of essential tasks via mobile devices.

System requirements :

1. **Operating System:** Platform-independent.
    - Example: Android and iOS cross-platform

2. **Software Dependencies**:The following technologies will be used in the course of development of the project.
    - **Programming Languages**: JavaScript
    - **Frameworks and Libraries:** React-Native Elements (https://reactnativeelements.com/) for styling, React-Native Navigation (https://reactnavigation.org/) for navigation.
    - **API**: IMS IIITH web server APIs.
    - **Stores**: Android store and iOS store.
    - **Development Environment:** Visual Studio Code for development and Android studio for deployment and testing.
    - **Version Control** : Git for version control, backed up in a GitHub (course) repository and a GitLab (client) repository

Users profile

IIIT Students :

- **Mode of Usage :** IIIT students use the mobile application to apply for leaves, travel expenses, advances and status tracking of applied requests. They can check their attendance and transcript. Students will be able to view and edit their profile and bank details.

IIIT Research Applicants :

- **Mode of Usage** : Undergraduate students at IIIT can apply for research advisors when seeking the honors program. Dual degree students can also apply for advisors, and M.S/M.Tech as well as Ph.D. students can apply for research advisors as part of their research process.

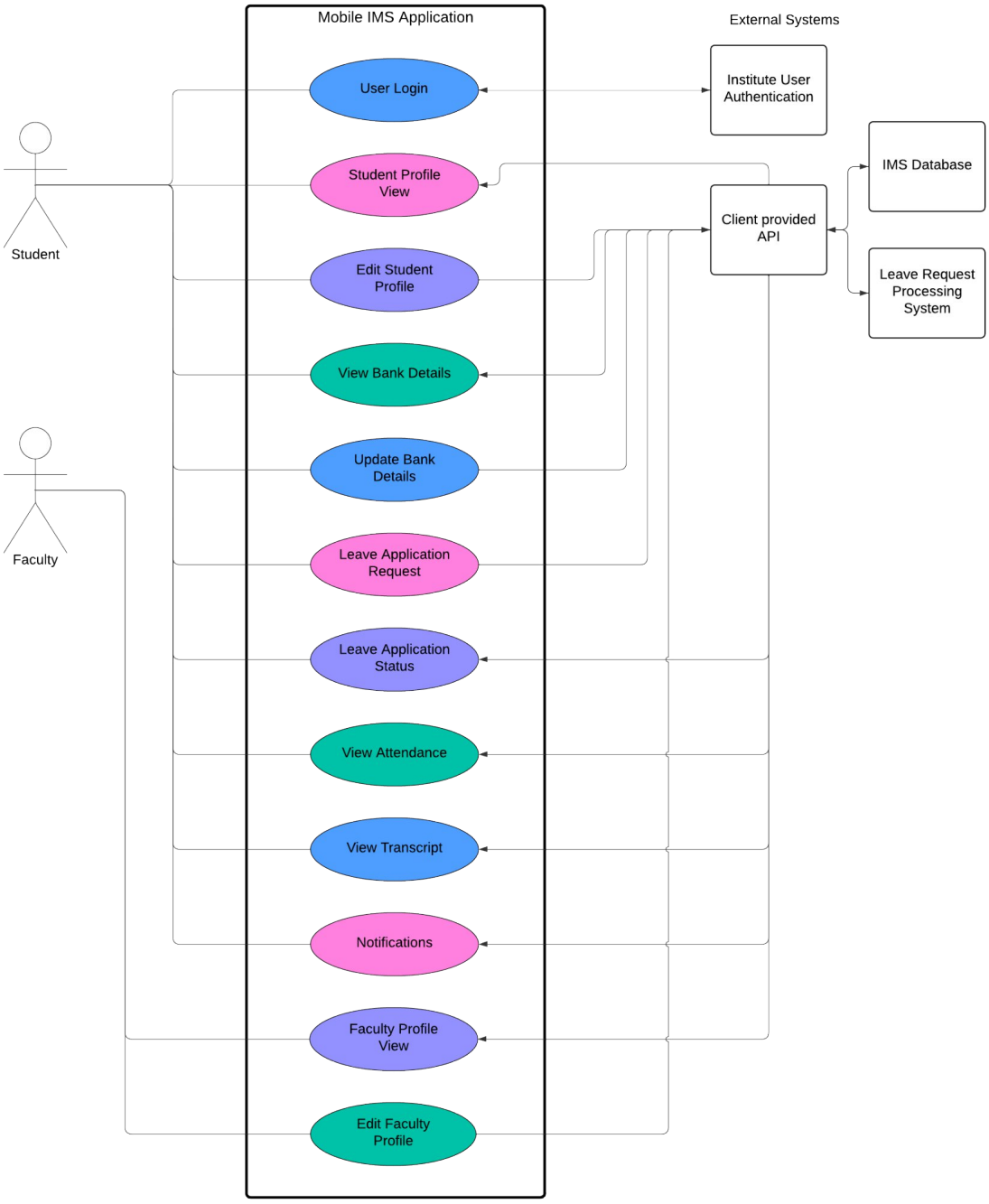
Professors :

- **Mode of Usage :** IIIT professors will use this application to view their profile and approve courses for students. They can view grades and analytics of a course.

Feature requirements (described using use cases)

No.	User Case Name	Description	Release
1.	User Login	The user login use case enables students and faculty to securely access and manage their academic and institute information within the system. The login ensures seamless and protected user experience.	R1
2.	Student Profile View	“View Profile” functionality allows users to review and access their personal information. They navigate through their profile and ensure that information is accurate and up-to-date.	R1
3.	Edit Student Profile	The “Edit Profile” feature enables users to update some details and customize their personal information.	R1
4.	View Bank Details	Students will be able to view their bank details they have uploaded. The Institute requires students to upload their bank details and hence this is an important use case.	R1
5.	Update Bank Details	The purpose of this is to enable students to securely and conveniently update their bank details through the mobile app, ensuring accurate and up-to-date information for seamless transactions.	R1
6.	Leave Application Request	The leave application process allows students to formally request for leaves for reasons like medical issues, travel for events, sports etc. The request is then forwarded for further processing according to the process described by the institute.	R2
7.	Leave Application Status	Students can view the approval status of their leave requests. They will be able to see the 5 recent leave requests they made and on a separate page they will be able to see all of their past leave requests.	R2
8.	View Attendance	Students can view their attendance in the courses they are attending. They will be able to see how many absences they have so far in each course and how many they can take.	R2
9.	View Transcript	Students can view their transcript showing their grades in their courses over the various semesters they have been in the institute. It also shows their SGPA and CGPA over the semesters.	R2
10.	Notifications	Students will receive notifications for approved/rejected leave requests. They will also be notified if they have taken more than the allowed number of leaves from a course.	R2
11.	Faculty Profile View	Faculty can use the application to view their profile details. They will be shown the details they would have provided to the institute for a convenient review whenever they may need.	R1
12.	Edit Faculty Profile	Faculty can update their profile information if they find the existing details to not be up to date. They will be able to modify editable details in their profile.	R1

Use case diagram



Use case description :

Use Case Number:	UC-01
Use Case Name:	User Login
Overview:	The user login feature enables students and faculty to securely access and manage their academic and institute information within the system. It serves as the primary entry point offering a secure and personalized access to a variety of functionalities.
Actors:	Students and Faculty and Institute User Authentication
Pre condition:	User should be valid and already registered with their details in the institute's database
Flow:	1. The user is asked to enter their username and password. 2. User enters the valid details and click on the login button. 3. If details are correct, they will be redirected to the dashboard.
	Alternate flow 1: 1. If the user entered incorrect details they are asked to enter correct details. 2. Repeat 1 till correct details have been entered. Also display forgot password and reset password links. 3. User enters the correct details. Post condition: User is redirected to the dashboard. **Alternate flow 2:** 1. User selects the forgot password option and is redirected to its webpage. 2. User follows instructions as per the webpage and gets a new password. 3. User is shown the login page again. Post condition: User is at the start of the main flow. **Alternate flow 3:** 1. User selects the reset password option and is redirected to its webpage. 2. User follows instructions as per the webpage and gets a new password. 3. User is shown the login page again. Post condition: User is at the start of the main flow. **Alternate flow 4:** 1. At any step in the main flow (or any of the above alternate flows), the device is not connected to the IIIT Network. 2. Then the student is shown a message to connect to the network. 3. If connection to IIIT network is restored, the last action is ignored. (If the student had pressed "Save Changes" they would need to do it again.) Post Condition: The student is at the page they were at when the connection was lost, and their last action is ignored.
Post Condition:	If credentials are correct, the user gets authenticated as a student or faculty, and will be redirected to the dashboard.

Use Case Number:	UC - 02
Use Case Name:	Student Profile View
Overview:	“View Profile” functionality allows users to review and access their personal information. They navigate through their profile and ensure that information is accurate and up-to-date.
Actors:	Students
Pre condition:	The student must be successfully authenticated and logged into the mobile app and is currently at the dashboard.
Flow:	1. Students tap on either of two options for profile details: General Information and Address Details. 2. Students are redirected to the corresponding page.
	Alternate flow: 1. On choosing a profile option, at that moment the device is not connected to the IIIT Network. 2. Then the student is shown a message to connect to the network. 3. If connection to IIIT network is restored, the last action is ignored. <u>Post Condition:</u> The student is at the dashboard.
Post Condition:	The student is shown their profile details (if some details are not present in the database they are shown blank).

Use Case Number:	UC-03
Use Case Name:	Edit Student Profile
Overview:	The “Edit Profile” feature enables users to update some details and customize their personal information.
Actors:	Students
Pre condition:	The student must be successfully authenticated and logged into the mobile app and is currently in a profile page (General Information or Address Details).
Flow:	1. Student taps on the Edit details option. 2. They are shown the fields they can edit, and the fields they cannot edit are blocked. 3. Students edit the details they wish to edit and press “Save Changes”.
	Alternate flow : 4. At any step in the main flow, the device is not connected to the IIIT Network. 5. Then the student is shown a message to connect to the network. 6. If connection to IIIT network is restored, the last action is ignored. (If the student had pressed “Save Changes” they would need to do it again.) <u>Post Condition:</u> The student is at the page they were at when the connection was lost, and their last action is ignored.
Post Condition:	The new details are updated in the institute database and the student is taken to the corresponding profile page they were editing, where they can view the updated details.

Use Case Number:	UC-04
Use Case Name:	View Bank Details
Overview:	Students will be able to view their bank details they have uploaded. The Institute requires students to upload their bank details and hence this is an important use case.
Actors:	Students
Pre condition:	The student must be successfully authenticated and logged into the mobile application. They must be at the dashboard page.
Flow:	1. Students tap on the “Bank Details” option. 2. They will be redirected to the Bank Details page.
	Alternate flow : 1. On choosing the Bank Details option, at that moment the device is not connected to the IIIT Network. 2. Then the student is shown a message to connect to the network. 3. If connection to IIIT network is restored, the last action is ignored. <u>Post Condition:</u> The student is at the dashboard.
Post Condition:	The student's bank details will be displayed (if some details are not present in the database they are shown blank)

Use Case Number:	UC-05
Use Case Name:	Update bank details
Overview:	The purpose of this use case is to enable students to securely and conveniently update their bank details through the mobile app, ensuring accurate and up-to-date information for seamless transactions
Actors:	Students
Pre condition:	The student must be successfully authenticated and logged into the mobile app. The user should have the necessary permissions to modify their bank details. They should be at the Bank Details page.
Flow:	1. Student taps on the Edit details option. 2. They are shown the fields they can edit, and the fields they cannot edit are blocked. 3. Students edit the details they wish to edit and press “Save Changes”.
	Alternate flow : 1. At any step in the main flow, the device is not connected to the IIIT Network. 2. Then the student is shown a message to connect to the network. 3. If connection to IIIT network is restored, the last action is ignored. (If the student had pressed “Save Changes” they would need to do it again.) <u>Post Condition:</u> The student is at the page they were at when the connection was lost, and their last action is ignored.
Post Condition:	The new details are updated in the institute database and the student is taken to the Bank Details page, where they can view the updated details.

Use Case Number:	UC-06
Use Case Name:	Leave Application Request
Overview:	The leave application process allows students to formally request for leaves for reasons like medical issues, travel for events, sports etc. The request is then forwarded for further processing according to the process described by the institute.
Actors:	Students
Pre condition:	The student must be successfully authenticated and logged into the mobile app. They should be at the dashboard page.
Flow:	1. The student taps on the Leaves button and is redirected to the respective page. 2. They then tap on the ”Add New Request” option and are then redirected to the respective page. 3. They follow instructions on the page and enter all valid details and upload required documents. 4. They then press the “Submit Request” button. 5. The request will be sent to the concerned authorities.
	Alternate Flow: 1. At any step in the main flow, the device is not connected to the IIIT Network. 2. Then the student is shown a message to connect to the network. 3. If connection to IIIT network is restored, the last action is ignored. (If the student had pressed “Submit Request” they would need to do it again.) <u>Post Condition:</u> The student is at the page they were at when the connection was lost, and their last action is ignored.
Post Condition:	The Leave request is sent to the concerned authorities. The user is then taken to the main Leave Application Page where they can see the status of this latest request.

Use Case Number:	UC-07
Use Case Name:	Leave Application Status
Overview:	Students can view the approval status of their leave requests. They will be able to see the 5 recent leave requests they made and on a separate page they will be able to see all of their past leave requests.
Actors:	Students
Pre condition:	The student must be successfully authenticated and logged into the mobile app. They must be at the dashboard.
Flow:	1. Student taps on the Leaves button and is redirected to that page. 2. Here they can view their latest five leave applications, along with the status of approval (accepted, rejected or pending).
	Alternate flow 1: 1. At step 2 in the main flow, the student taps on the “View Older Requests” option. 2. They are redirected to a new page with the list of all their older (other than the latest five) leave applications, along with the status of approval (accepted, rejected or pending). <u>Post condition:</u> The student can see the details of their older leave applications. **Alternate Flow:** 1. At any step in the main flow, the device is not connected to the IIIT Network. 2. Then the student is shown a message to connect to the network. 3. If connection to IIIT network is restored, the last action is ignored. <u>Post Condition:</u> The student is at the page they were at when the connection was lost, and their last action is ignored.
Post Condition:	The student can see the details of their latest five leave requests.

Use Case Number:	UC-08
Use Case Name:	View Attendance
Overview:	Students can view their attendance in the courses they are attending. They will be able to see how many absences they have so far in each course and how many they can take.
Actors:	Students
Pre condition:	The student must be successfully authenticated and logged into the mobile app. They must be at the dashboard.
Flow:	1. Students click on the “View Attendance” option. 2. They are redirected to the corresponding page. 3. They select the semester of which they want to view attendance. 4. They are shown a list of the courses they had during that semester. 5. They select the course for which they wish to view attendance.
	Alternate Flow: 1. At any step in the main flow, the device is not connected to the IIIT Network. 2. Then the student is shown a message to connect to the network. 3. If connection to IIIT network is restored, the last action is ignored. <u>Post Condition:</u> The student is at the page they were at when the connection was lost, and their last action is ignored
Post Condition:	The student is shown a table containing the dates the chosen course had classes, and whether they have been marked present or absent for it.

Use Case Number:	UC-09
Use Case Name:	View Transcript
Overview:	Students can view their transcript showing their grades in their courses over the various semesters they have been in the institute. It also shows their SGPA and CGPA over the semesters.
Actors:	Students
Pre condition:	The student must be successfully authenticated and logged into the mobile app. They must be at the dashboard.
Flow:	1. The student taps on the “Transcript” option in the dashboard. 2. They are then redirected to the respective page.
	Alternate flow: 1. The student chooses the “Semester Wise Transcript” option. 2. They are shown a list of the semesters they have been in the institute so far. 3. The student chooses the semester for which they wish to view the transcript. Post condition: The student is shown the grades they received in the courses they had in the chosen semester, the total credits for each course along with the SGPA for and cumulative CGPA till that semester. **Alternate Flow:** 1. At any step in the main flow, the device is not connected to the IIIT Network. 2. Then the student is shown a message to connect to the network. 3. If connection to IIIT network is restored, the last action is ignored. Post Condition: The student is at the page they were at when the connection was lost, and their last action is ignore
Post Condition:	The student is shown a summarized version of their transcript, containing the SGPA for each semester so far and their CGPA.

Use Case Number:	UC-10
Use Case Name:	Notifications
Overview:	Students will receive notifications for approved/rejected leave requests. They will also be notified if they have taken more than the allowed number of leaves from a course.
Actors:	Students.
Pre condition:	The student must be successfully authenticated and logged into the mobile app. They must be at the dashboard.
Flow:	1. The student taps on the Notifications option and is redirected to the corresponding page. 2. They can see the latest notifications they have received.
	Alternate flow 1: 1. The student taps on the “Older Notifications” option and is redirected to a new page. **Post condition**: They can see older notifications they have received **Alternate flow 2:** 1. The student taps on the “Clear Notifications” option. 2. The notifications stored in the device are cleared and the student is redirected to the main Notifications page. **Post condition:** The student can see that they have no new notifications.
Post Condition:	The student can see the notifications they have received, which may be due to an update in the status of a leave request (approved or rejected) or due to the student having the maximum allowed absences from a course.

Use Case Number:	UC-11
Use Case Name:	Faculty Profile View
Overview:	“View Profile” functionality allows users to review and access their personal information. They navigate through their profile and ensure that information is accurate and up-to-date.
Actors:	Faculty
Pre condition:	The faculty must be successfully authenticated and logged into the mobile app and is currently at the dashboard.
Flow:	1. Faculty taps on either of two options for profile details: General Information and Address Details. 2. Faculty is redirected to the corresponding page.
	Alternate flow: 1. On choosing a profile option, at that moment the device is not connected to the IIIT Network. 2. Then the faculty is shown a message to connect to the network. 3. If connection to IIIT network is restored, the last action is ignored. <u>Post Condition:</u> The Faculty is on the dashboard.
Post Condition:	The Faculty is shown their profile details (if some details are not present in the database they are shown blank).

Use Case Number:	UC-12
Use Case Name:	Edit Faculty Profile
Overview:	The “Edit Profile” feature enables users to update some details and customize their personal information.
Actors:	Faculty
Pre condition:	The Faculty must be successfully authenticated and logged into the mobile app and is currently in a profile page (General Information or Address Details).
Flow:	1. Faculty taps on the Edit details option. 2. They are shown the fields they can edit, and the fields they cannot edit are blocked. 3. Faculty edit the details they wish to edit and press “Save Changes”.
	Alternate flow : 1. At any step in the main flow, the device is not connected to the IIIT Network. 2. Then the faculty is shown a message to connect to the network. 3. If connection to IIIT network is restored, the last action is ignored. (If the student had pressed “Save Changes” they would need to do it again.) Post Condition: The faculty is at the page they were at when the connection was lost, and their last action is ignored.
Post Condition:	The new details are updated in the institute database and the faculty is taken to the corresponding profile page they were editing, where they can view the updated details.