

FULL STACK JS PROJECT REPORT

SPECIALITY : TWIN

**DEVELOPMENT OF A WEB PLATFORM FOR
MANAGING PSYCHOLOGICAL SUPPORT AT
ESPRIT UNIVERSITY**

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1.1 Background and motivations

The rise in mental health challenges among students, particularly in university settings, has made it increasingly important for institutions to provide accessible and effective psychological support. At Esprit University, the growing demand for psychological assistance has highlighted the need for a streamlined, secure, and structured approach to managing student well-being. This project is motivated by the desire to create a platform that not only supports students facing difficulties but also fosters collaboration between students, faculty, and university psychiatrists to ensure timely intervention and appropriate care.

The primary goal of this platform is to empower students to seek help while maintaining their anonymity and ensuring their data remains secure. Additionally, it aims to provide teachers with the tools and guidance to better understand and address psychological issues within their classrooms. Ultimately, the project strives to create an environment where psychological support is accessible, efficient, and effective for both students and staff.

1.2 Study of the existing

Before developing a psychological support platform for students at Esprit University, it is essential to analyze existing solutions, both in Tunisia and internationally. This study will help identify best practices, strengths, and limitations of current platforms, allowing us to design a more efficient, secure, and user-friendly system tailored to the university's needs.

1.2.1 Tunisian Platforms :

- **Ahkili :**

Ahkili is a Tunisian online psychological support platform that allows individuals to receive anonymous and confidential counseling via phone calls. The platform connects users with professional psychologists who provide emotional support and guidance.



Figure 1: Ahkili logo

- **AlloPsy:**

AlloPsy is a Tunisian teleconsultation platform that offers online therapy sessions with certified psychologists. It enables users to schedule video, phone, or chat consultations, ensuring access to professional mental health support from anywhere.



Figure 2: AlloPsy logo

1.2.2 Foreign Platforms :

- **7 Cups :** 7 Cups is an online emotional support platform that provides free, anonymous chat-based support from trained volunteer listeners. It also offers paid therapy sessions with licensed therapists. The platform is designed to offer a community-driven approach to mental health by allowing users to connect with supportive individuals at any time.



Figure 3: 7 Cups logo

- **BetterHelp :** BetterHelp is a professional online therapy platform that connects users with licensed therapists through video calls, phone calls, and text-based chat. It provides personalized mental health support, but it is a paid service with a subscription-based model. The platform is designed for individuals seeking professional counseling in a flexible and convenient manner.



Figure 4: BetterHelp logo

1.3 Analysis of Existing Solutions

	Positive points	Negative points
Ahkili	<ul style="list-style-type: none">• Confidentiality and Anonymity• Access to Professional Support	<ul style="list-style-type: none">• Absence of Face-to-Face Consultation• Lack of A.I Integration
Allopsy	<ul style="list-style-type: none">• online consultations• Wide selection of qualified psychologists with detailed profiles.	<ul style="list-style-type: none">• Weak security• No Progress Tracking• No community space
7 Cups	<ul style="list-style-type: none">• Community forums and group discussions• Free anonymous support, making it accessible to everyone.	<ul style="list-style-type: none">• Limited support in severe cases• No video or voice consultations, limiting deeper therapeutic interactions.
Better Help	<ul style="list-style-type: none">• Personalized therapist matching• Multiple communication options	<ul style="list-style-type: none">• No free option• Not specifically designed for students

Figure 5: Analysis of existing solutions

1.4 Project objective

The objective of this project is to develop a web platform designed to provide Esprit University with a structured, secure, and efficient system for managing psychological support for students facing difficulties. The platform will foster collaboration between students, teachers, and university psychiatrists to ensure that troubled students are identified in a timely manner, receive necessary feedback, and are offered tailored follow-up actions for each case.

1.5 Business features

To ensure a structured, secure, and efficient psychological support system for Esprit University, the platform includes the following key business features:

1 - Anonymous Reporting :

- Allows students to anonymously report psychological distress.
- Ensures confidentiality and security, encouraging more students to seek help.

2 - Security Features :

- Implements secure authentication and data encryption to protect sensitive information.
- Role-based access control to ensure that only authorized users (students, teachers, and psychiatrists) can access relevant data.

3 - Guidance Tools :

- Provides educational resources and self-help materials for students and teachers.
- Offers automated recommendations based on reported psychological concerns.

4 - Resource Management System :

- Centralized system for storing and managing psychological support materials.
- Helps psychiatrists share relevant documents, guides, and videos with students.

5 - User Notifications :

- Sends real-time alerts and reminders to students, teachers, and psychiatrists.
- Ensures timely follow-up on reported cases and scheduled consultations.

6 - Feedback System :

- Allows students to rate and review their support experience.
- Provides psychiatrists with insights on session effectiveness for continuous improvement.

7 - Progress Tracking :

- Enables psychiatrists to track student progress over time.
- Students can view their support history and recommendations for self-improvement.

8 - Insights and Analytics :

- Generates detailed reports and statistics on mental health trends within the university.
- Helps decision-makers implement effective well-being strategies based on real data.

2.1 Functional Requirements

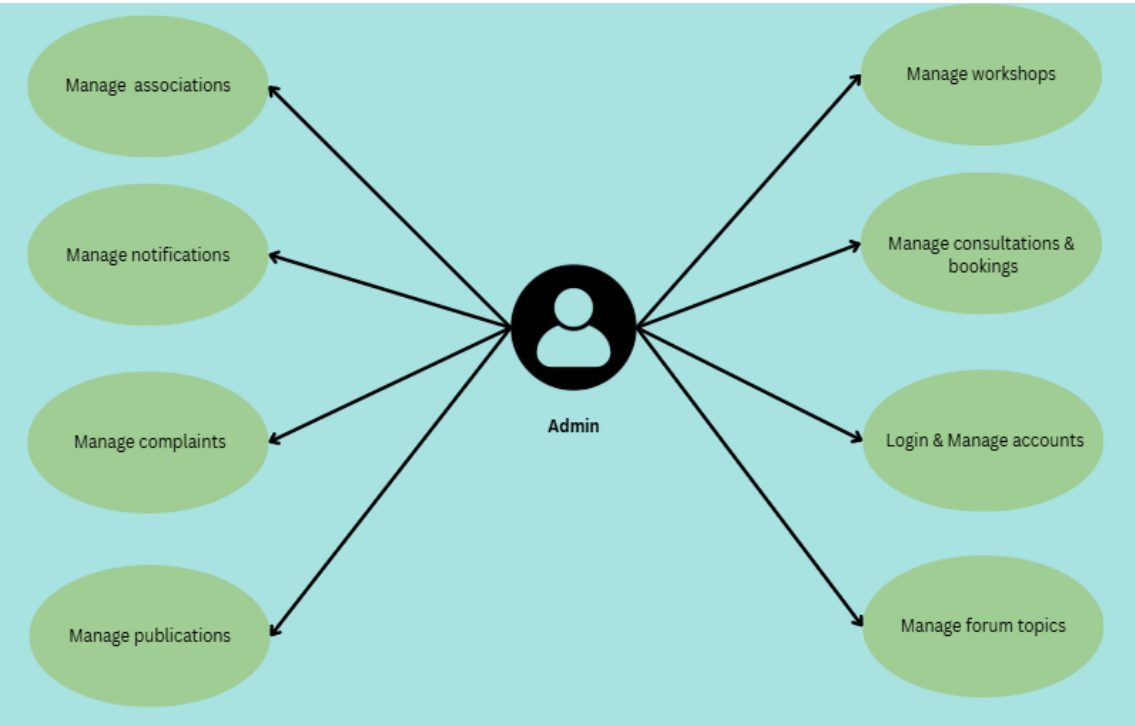


Figure 6: admin

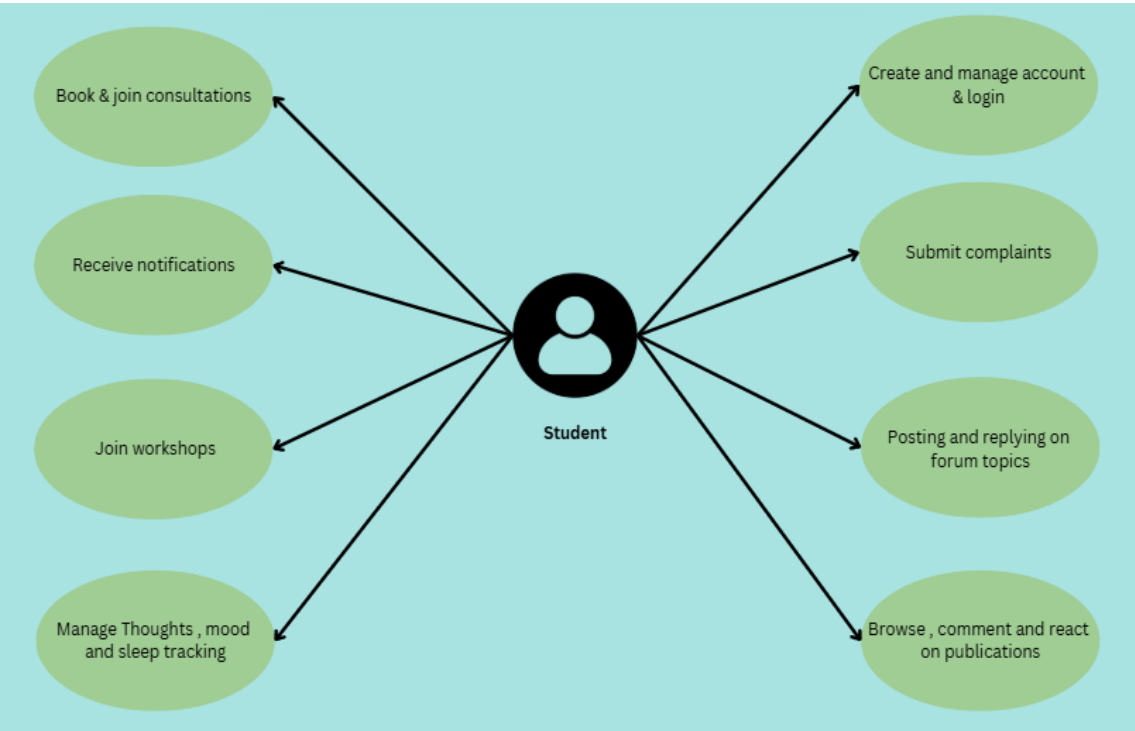


Figure 7: student

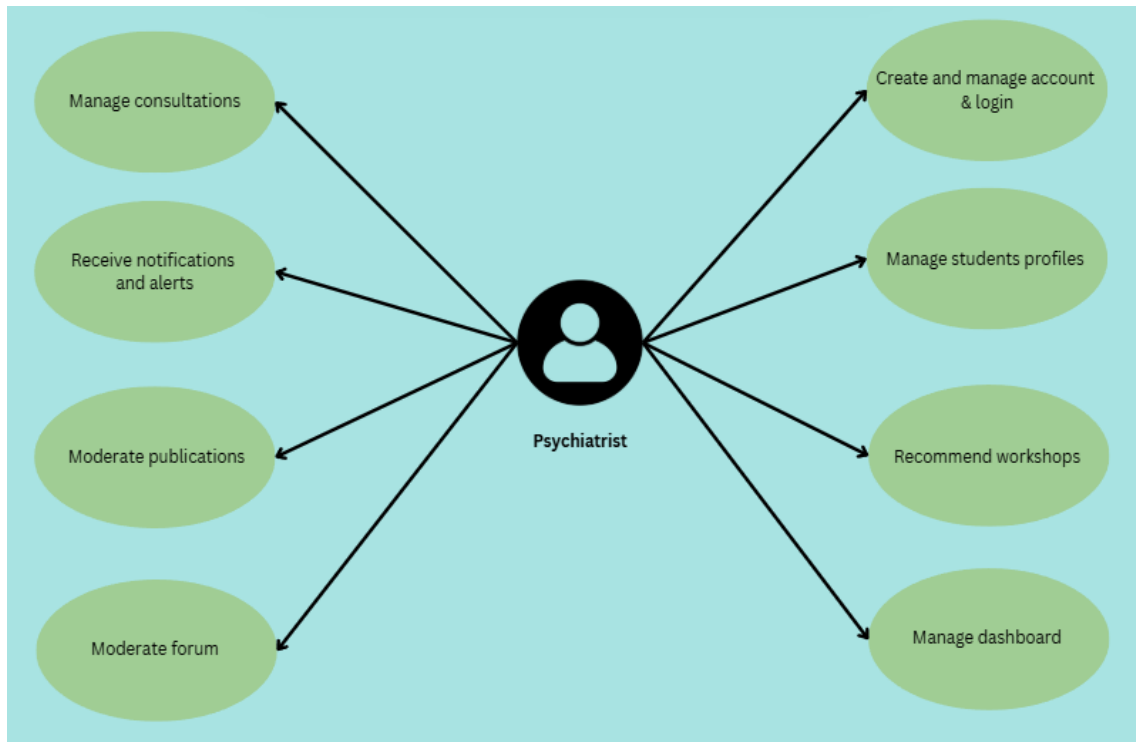


Figure 8: Psychiatrist

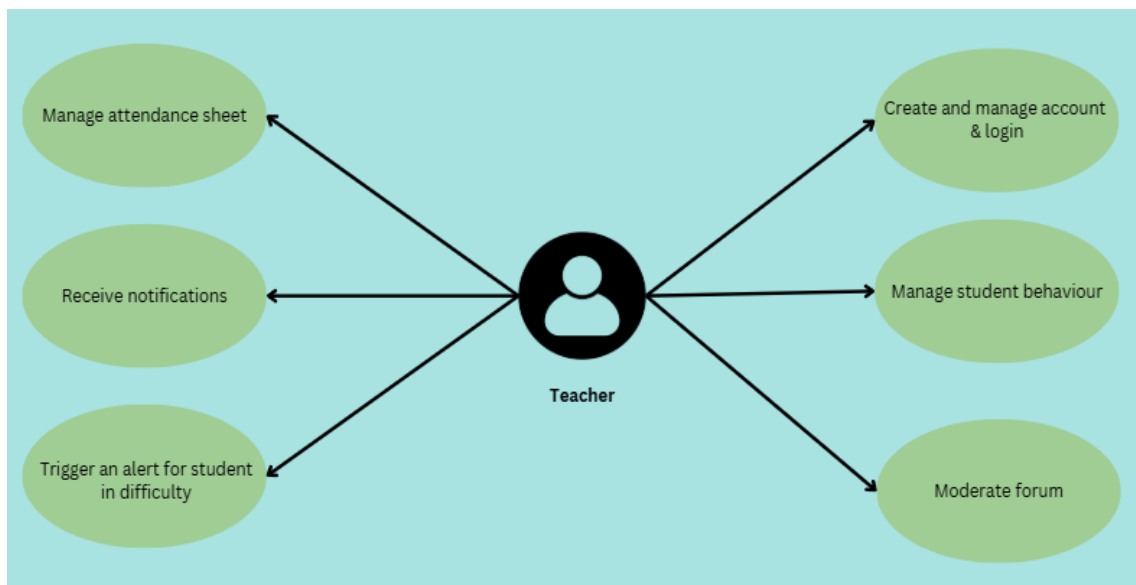


Figure 9: teacher

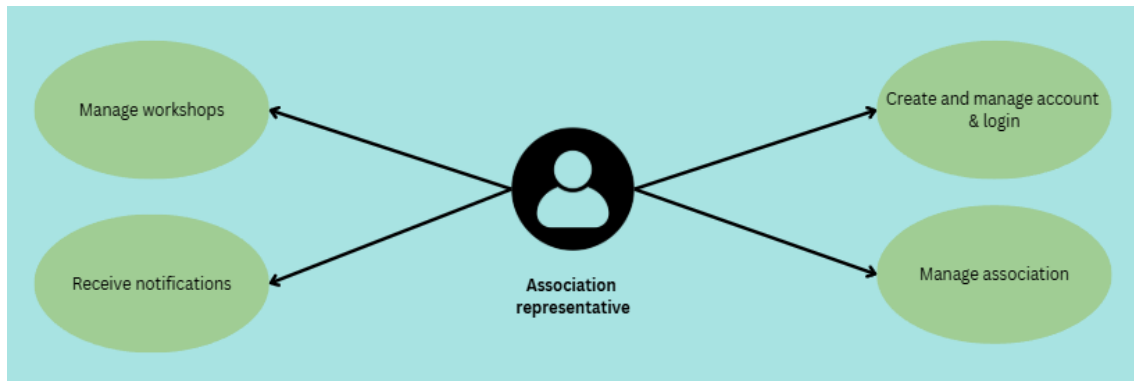


Figure 10: Association representative

2.2 Non-Functional Requirements

- **Performance and Scalability :**

- The response time for loading a consultation session must not exceed 2 seconds under normal conditions
- The platform must be scalable, allowing an increase in users without affecting performance.

- **Security and Privacy :**

- User data must be securely stored and anonymized.
- Students must have full control over their data, with options to delete their consultation history if needed.
- All communications (chat, video, audio) must be end-to-end encrypted.

- **Availability and Reliability :**

- The system must have an uptime of 99.9 percent to ensure continuous availability of mental health services.

- **User Experience (UX) and Accessibility :**

- The interface must be intuitive and user-friendly, allowing students, teachers, and psychiatrists to navigate easily.
- A dark mode/light mode option should be available for improved readability and reduced eye strain.

2.3 Product Backlog

Module	User Story N°	As a ...	User story	priority
User	1	Student / Teacher/ Psychiatrist/Association Representative	I want to create an account so that I can access the platform.	High
	2	Student / Teacher/ Psychiatrist / admin / Association Representative	I want to log in securely so that I can access my personalized dashboard and interact with the platform.	High
	3	Student / Teacher/ Psychiatrist / Association Representative	I want to reset my password in case I forget it so that I can regain access to my account.	High
	4	Student / Teacher/ Psychologist / Association Representative	I want to update my profile information (username, email, profile picture) so that I can personalize my account.	Medium
	5	Student / Teacher/ Psychiatrist / Association Representative	I want to enable two-factor authentication so that I can enhance the security of my account.	Medium
	6	Admin	I want to manage user accounts (activate, deactivate, delete) so that I can ensure platform security and compliance.	High
	7	Admin	I want to view a list of all users so that I can monitor activities and manage the community effectively.	High
	8	Admin	I want to view user activity logs so that I can track suspicious activities and ensure platform security.	High

Module	User Story N°	As a ...	User story	priority
Forum	9	Student	Posting a New Topic: As a student, I want to be able to create a new topic on the forum so that I can ask questions, share concerns, or discuss psychological support-related issues with my peers. This should include a text input field, a topic title, and an option to attach images or files. The topic will then appear in the forum for others to engage with.	High
	10	Student	Replying to a Topic: As a student or teacher, I want to be able to reply to a topic so that I can contribute my thoughts, provide guidance, or offer support. The reply should include a text input field, and my response should be displayed beneath the original post with the option to reply again.	High
	11	Student	Searching for Topics: As a student, I want to be able to search for topics on the forum by keywords so that I can quickly find relevant discussions. The search should return a list of topics matching the keywords and provide filters such as date, popularity, and category.	Medium
	12	Student	Report Inappropriate Content: As a student, I want to report inappropriate content to help maintain a safe and respectful discussion space. The report functionality should allow me to flag posts as inappropriate, and administrators or moderators will review them.	High
	13	Student	relevant topic: As a student, I want to see topics that are relevant to my concerns, such as psychological support, mental health, and academic discussions. The forum should highlight topics based on keywords, category relevance, or user preferences.	Medium

Module	User Story N°	As a ...	User story	priority
Forum	14	Moderator (teacher or psychiatrist)	Moderating the Forum: As a forum moderator (teacher or psychiatrist), I want to be able to delete inappropriate posts and flag content to maintain the quality of the forum. The moderator interface should allow me to easily manage flagged posts, delete them, and issue warnings to users if needed.	High
	15	Moderator (teacher or psychiatrist)	Participating in Discussions: As a teacher/ psychiatrist, I want to participate in discussions to provide guidance and support. My replies should be visible to all participants, and I should be able to follow up on ongoing discussions to offer consistent help.	Medium
	16	Moderator (teacher or psychiatrist)	Pin Important Topics: As a teacher/ psychiatrist, I want to <u>pin</u> important topics to ensure that useful discussions remain visible. This functionality should allow me to highlight specific threads at the top of the forum for easy access.	Medium
	17	Moderator (teacher or psychiatrist)	Track and Follow Favorite Discussions: As a teacher/psychologist, I want to track and follow my favorite discussions to ensure I can revisit them later. The feature should allow me to bookmark discussions and receive notifications on updates or replies.	Low

Module	User Story N°	As a ...	User story	priority
Forum	18	Admin	Manage Post Visibility: As an admin, I want to manage the visibility of posts so that I can ensure compliance with platform rules. This should include options to hide, show, or restrict access to posts based on content or user behavior.	High
	19	Admin	Ban or Suspend Users: As an admin, I want to ban or suspend users who violate the rules so that I can maintain a safe environment. The system should allow me to issue warnings, suspend users for a set time, or permanently ban them, based on the severity of the violation.	High
	20	admin	View Analytics on Forum Activity: As an admin, I want to view analytics on forum activity so that I can monitor engagement and participation. This should include metrics such as active users, number of posts, replies, and the most popular topics over a given time frame.	Medium

Module	User Story N°	As a ...	User story	priority
Complaint	21	Student	Submit a Complaint: As a student, I want to submit a complaint so that I can report issues affecting my well-being. The complaint form should include fields for the nature of the complaint, a description, and an option to attach files or documents. After submission, the complaint should be logged into the system.	High
	22	Student	Track the Status of a Complaint: As a student, I want to track the status of my complaint so that I know when it is being addressed. The system should allow students to view the current status of their complaint (e.g., "In Review", "Resolved", "Pending") and provide an option to view updates or comments from administrators.	High
	23	Student	Receive a Response to My Complaint: As a student, I want to receive a response to my complaint so that I know how it is being handled. Students should receive notifications when their complaint has been reviewed and responded to, including a summary of actions or decisions made.	High

Module	User Story N°	As a ...	User story	priority
Complaint	24	Admin	Review Complaints: As an admin, I want to receive and review complaints so that I can take appropriate action. Admins should have an interface to view all incoming complaints, filter by status, priority, and student name, and access the complaint details to understand the issue.	High
	25	Admin	Update the Status of Complaints: As an admin, I want to update the status of complaints so that students are informed about progress. Admins should be able to change the status of complaints (e.g., "In Review", "Resolved") and provide updates or comments regarding the next steps in the process.	Medium
	26	Admin	Respond to Student Complaints: As an admin, I want to respond to student complaints so that I can provide solutions or explanations. Admins should be able to write and send responses to complaints, which will be visible to the student who submitted the complaint.	Medium
	27	Admin	Generate Reports on Complaints: As an admin, I want to generate reports on complaints so that I can identify recurring issues and improve the system. Admins should be able to filter and generate reports on complaints by category, frequency, resolution time, and other relevant metrics. These reports should be downloadable for further analysis.	Medium

Module	User Story N°	As a ...	User story	priority
Appointment	28	psychiatrist	Manage Availability: As a psychiatrist, I want to manage my availability so that I can set my consultation slots, allowing students to book appointments accordingly. This should include options to define working hours, block specific dates, and handle emergency slots.	High
	29	Student	View Availability: As a student, I want to view the availability of psychiatrists in real-time so that I can choose a time slot that suits me. The system should display available slots, preferred languages, and psychiatrist specialties.	High
	30	Student	Receive Reminder: As a student, I want to receive a reminder via email or SMS before my consultation so that I don't forget it. This reminder should include the date, time, and access link for the session.	Medium
	31	Admin	Manage Bookings: As an admin, I want to manage appointment bookings to ensure smooth scheduling and avoid conflicts. I should be able to reschedule, cancel, or reassign appointments when necessary, notify users of changes, and resolve scheduling conflicts efficiently.	High

Module	User Story N°	As a ...	User story	priority
Online consultation	32	Admin	Schedule & Assign Consultations: As an admin, I want to manually or automatically schedule and assign consultations to psychiatrists based on their availability, specialties, and workload to ensure the right support for each student. This should include bulk scheduling and an override feature.	High
	33	Psychiatrist	View Student Profile: As a psychiatrist, I want to view the student's profile to have background information before the session. This should include past consultations, session notes, and flagged concerns from teachers or administrators.	High
	34	Student	Join Online Consultation: As a student, I want to join an online consultation with a psychiatrist via video, audio, or chat so I can talk freely. The system should provide a secure and confidential platform with easy access.	High
	35	Psychiatrist	Take Notes: As a psychiatrist, I want to take notes during the session to track the patient's progress. These notes should be securely stored, accessible for follow-up sessions, and shareable with authorized personnel if necessary.	High

Module	User Story N°	As a ...	User story	priority
Follow-up & History	36	Psychiatrist	Access Consultation History: As a psychiatrist, I want to access notes from previous consultations to provide personalized follow-up. This should include filtering options by date, session type, or student progress.	High
	37	Student	View Consultation History: As a student, I want to view my consultation history to track my progress. This should allow me to review past discussions, action points, and recommendations made by the psychiatrist.	High
	38	Student	Rate Session: As a student, I want to rate the session after the consultation to give feedback on its effectiveness. The feedback system should allow for anonymity and include rating scales and optional comments.	Low
	39	Admin	Generate Reports & Statistics: As an admin, I want to generate reports and analyze consultation trends and user engagement over a period to improve the service. Reports should include metrics such as the number of sessions conducted, user feedback summaries, peak consultation times, and psychiatrist performance evaluations.	Medium

Module	User Story N°	As a ...	User Story	Priority
Publication	40	Student	View Publications : As a student, I want to be able to browse available publications so that I can access resources and advice tailored to my situation.	High
	41	Student	Search for a Publication : As a student, I want to be able to search for publications using keywords or categories so that I can quickly find relevant content.	Medium
	42	Student	Filter Publications : As a student, I want to be able to filter publications by title or date so that I can refine my search and easily find the information I need.	Medium
	43	Student	Comment on a Publication : As a student, I want to be able to leave comments, either with my name or anonymously, so that I can express my opinion and engage with the content.	High
	44	Student	Edit My Comment : As a student, I want to be able to edit my comments on a publication so that I can correct mistakes or improve clarity.	High
	45	Student	Delete My Comment : As a student, I want to be able to delete my comments on a publication so that I can remove comments that are no longer relevant.	High
	46	Student	React to Publications : As a student, I want to be able to react to publications by adding likes or dislikes so that I can express my feelings about the shared content.	Medium
	47	Student	Receive Notifications : As a student, I want to receive notifications when a new publication is added so that I don't miss important information.	High
	48	Student	Report an Inappropriate Publication : I want to be able to report an inappropriate publication, and after a certain number of reports, the publication should be automatically removed to ensure high-quality content.	High
	49	Student	View Related Publications : As a student, when I view a publication, I want to see other publications that have the same tag so that I can easily find related content.	Medium

Module	User Story N°	As a ...	User Story	Priority
Publication	50	Moderator (Psychiatrist)	Create and Publish Content: As a moderator, I want to be able to write articles, or guides so that I can inform and raise awareness among students about psychological issues.	High
	51	Moderator (Psychiatrist)	Edit a Publication : As a moderator, I want to be able to edit my publications so that I can update their content and ensure their relevance.	High
	52	Moderator (Psychiatrist)	Delete a Publication : As a moderator, I want to be able to delete my publications so that I can remove outdated or irrelevant content.	High
	53	Moderator (Psychiatrist)	Pin an Important Publication : As a moderator, I want to be able to pin an important publication so that it stays at the top of the list and is easily accessible to students	Medium
	54	Moderator (Psychiatrist)	Search and Filter My Publications : As a moderator, I want to be able to search and filter my publications by title, tags, or date so that I can quickly find and manage my content.	Medium

Module	User Story N°	As a ...	User Story	Priority
Publication	55	Admin	Approve or Reject Publications : As an administrator, I want to be able to review publications submitted by moderators and decide whether to approve or reject them to ensure content quality.	High
	56	Admin	Edit a Publication : As an administrator, I want to be able to edit publications if they do not comply with the rules or need updates to remain relevant.	High
	57	Admin	Delete a Publication : As an administrator, I want to be able to delete publications if they violate the platform's rules or become outdated.	High
	58	Admin	Archive Old Publications : As an administrator, I want to be able to archive publications after a certain period so that I can keep the interface clean and organized.	Medium
	59	Admin	Restore an Archived Publication : As an administrator, I want to be able to restore an archived publication if it becomes relevant again.	Medium
	60	Admin	View Global Publication Statistics : As an administrator, I want to be able to see statistics on all publications (number of views, likes, comments) so that I can analyze trends and user engagement.	Medium
	61	Admin	Automatic Activity Report Generation: As an administrator, I want AI to generate reports on user engagement, the most popular publications, and trends so that I can adjust my management strategy.	Medium

Modules	User Story N°	As a ...	User Story	Priority
Attendance Sheet Management	62	Teacher	Create an attendance sheet after each session to track students' behavior.	High
	63	Teacher	Add comments and emojis (participation, respect, concentration) to specify the evaluated aspects.	High
	64	Teacher	View a student's attendance history.	High
	65	Student	Access my attendance records and see the comments left by my teachers to improve myself.	Medium
	66	Psychiatrist	Access a student's attendance records in case of an alert.	Low
Student Behavior Tracking	67	Teacher	View a student's behavior history as a graphical chart.	Medium
	68	Student	View my behavior history and the comments left by my teachers.	Medium
Alert Management	69	System	Generate an alert when a student receives too many negative comments to notify the psychologist.	Medium
	70	Teacher	Manually trigger an alert for a student in difficulty.	Medium
	71	Psychiatrist	Receive a list of alerts with students' problematic behaviors.	Low

Modules	User Story N°	As a ...	User Story	Priority
Dashboard for Psychologists	72	Psychiatrist	Access a centralized dashboard listing students under alert and their behavior history.	Low
	73	Psychiatrist	Use filters to organize alerts (by student, by date).	Low
Personalized Activities Management	74	Student	View my medical appointments and consultations in my calendar.	High
	75	Student	Add events with colors or categories to better visualize my priorities.	Medium
	76	Student	Choose activities like painting or music and add them to my schedule.	Medium
	77	Student	Associate goals or notes with each activity to track my progress.	Medium
	78	Student	Receive daily reminders to practice an activity I chose at my preferred time.	Low
	79	Student	Mark my tasks as completed when I finish them.	Medium
	80	Student	View the progress of my tasks through graphs to analyze my productivity.	Low

Modules	User Story N°	As a ...	User Story	Priority
Thoughts and Mood Tracking	81	Student	Describe an emotional problem I am going through to better understand it.	High
	82	Student	Evaluate my reaction to an emotional problem.	High
	83	Student	Track the progress of an emotional problem and assess its resolution over time.	Medium
	84	Student	Record my daily concerns and classify them by type (stress, anxiety) to better understand my negative thoughts.	High
	85	Student	Assess the severity of my concerns on a scale from 1 to 10 to measure the intensity of my emotions.	Medium
	86	Student	Answer introspective questions daily to reflect on my actions and emotions.	Medium
	87	Student	Track my daily mood and view graphs showing my emotional state evolution.	Low
	88	Student	View the impact of activities (exercises, meditation) on my mood to adjust my habits proactively.	Medium
	89	Student	Access all past recorded problems with their resolution status to track my progress.	Medium
	90	Student	Filter and sort my problems by type (stress, anxiety, conflicts) to understand recurring patterns.	Medium
	91	Student	See a visual report showing the progress in managing my problems.	Low

Modules	User Story N°	As a ...	User Story	Priority
Sleep Tracking	92	Student	Receive a reminder to go to bed at the ideal time for sufficient sleep.	High
	93	Student	Track my sleep hours (bedtime and wake-up time) and see sleep quality statistics.	High
	94	Student	View graphs showing the evolution of my sleep quality over time.	Low

Module	User Story N°	As a ...	User story	Priority
Association	95	Association Management	I want to create an association to organize activities for students.	High
	96	Admin/ Association Management	I want to edit association details to update information.	Medium
	97	Admin/ Association Management	I want to delete an association to manage active associations.	Medium
	98	Admin	I want to manage association members to add or remove participants.	High
	99	Admin	I want to track student participation in associations to evaluate their engagement.	Medium

Module	User Story N°	As a ...	User story	Priority
Workshop	100	Association Management	I want to create a workshop to offer training or events for students.	High
	101	Association Management	I want to edit workshop details to update information.	Medium
	102	Association Management	I want to delete a workshop to manage outdated events.	Medium
	103	Psychiatrist	I want to recommend a workshop to students to guide them towards useful training.	High
	104	Admin	I want to send notifications about workshops to inform students about new events.	High
	105	Admin	I want to track workshop participation to see the number of attendees.	Medium
	106	Student	I want to provide feedback on a workshop to share my opinion and improve future sessions.	Medium

3.1 Data Model

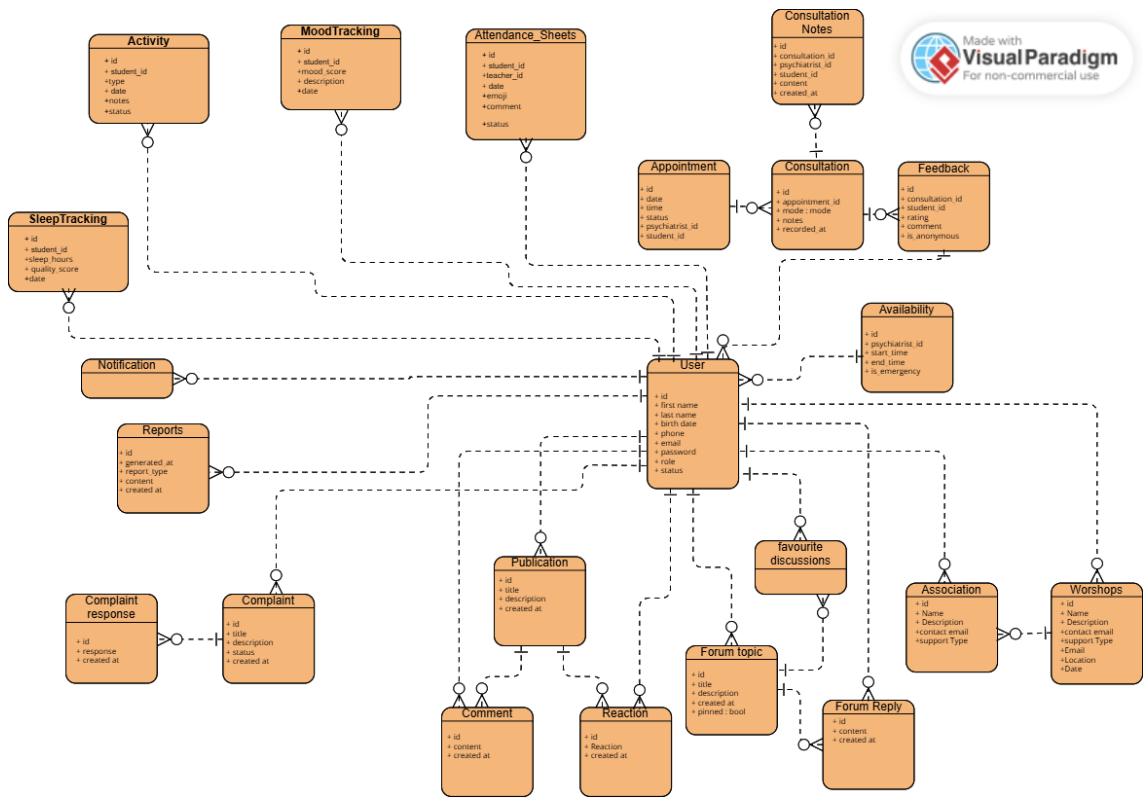


Figure 11: admin

4.1 Physical architecture

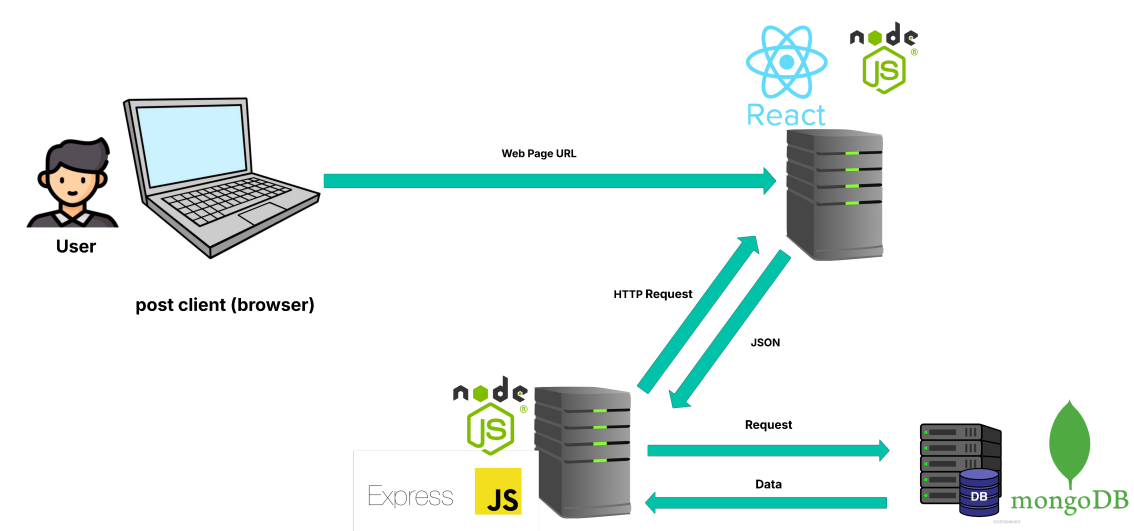


Figure 12: Physical Architecture

4.2 Logical architecture

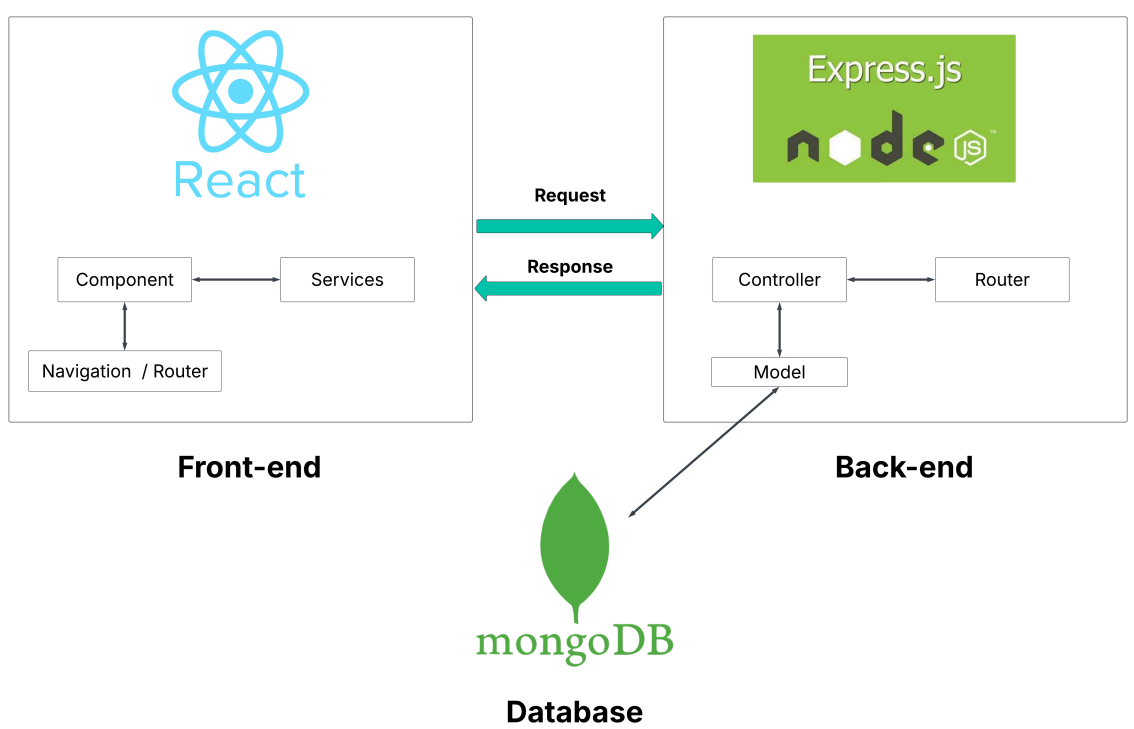


Figure 13: Logical Architecture

In this report, we have explored the background, motivations, and objectives of developing a psychological support platform for Esprit University. Through the study of existing solutions, both in Tunisia and internationally, we identified key strengths and limitations that helped shape the design of our system.

Our platform aims to bridge the gaps found in current solutions by offering a secure, structured, and efficient environment for students, teachers, and psychiatrists. By integrating features such as anonymous reporting, resource management, feedback systems, and AI-powered insights, our system enhances the effectiveness of psychological support within the university.

In conclusion, this project provides an innovative and scalable solution to improve student well-being, ensuring timely identification and follow-up for those in need. Future improvements may include expanding AI capabilities and integrating more interactive guidance tools to further enhance the user experience.



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