A logo for a company

Description automatically generated

**Lab-3 Assignment**

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**Submitted to:**

**Professor: Nawaz Chowdhury**

**Subject: Advanced web application**

**Course code: CSD230**

Honesty Statement: “I declare that this submission is my own work in compliance with Sault College Academic Policies.”

**Project Goal:**  
To develop *WellNest*, a culturally informed virtual mental health platform that offers users access to personalized therapy, self-paced courses, and AI-assisted support. The goal is to create a safe, inclusive, and user-friendly web application with distinct interfaces for users, counselors, and administrators.

**Git Repository Setup:**

* **Platform:** GitHub
* **Repository Name:** WellNest-mental-health-app
* **Structure:**
  + frontend/ – React.js + Bootstrap-based UI
  + backend/ – Node.js or Django APIs
  + docs/ – Project documentation
  + README.md – Overview, setup instructions, technologies used

**Identify Roles and Responsibilities for Each Team Member**

| **Team Member** | **Role** |
| --- | --- |
| Mehakpreet Kaur | Frontend Developer |
| Rupinder Kaur | Backend Developer |
| Lavish | UI/UX Designer |
| Arjun Sandhu | Admin |
| Vidhin Patel | Project Manager |
|  |  |

**Brainstorm Project Elements and Decide on Tools, Frameworks, Libraries**

**Key Project Elements:**

* **User Pages:** Signup, Login, About, Dashboard, Chatbot
* **Role-based Access:** Users, Counselors, Admins
* **Features:** AI Chatbot, Therapy Sessions, Course Tracker, Admin Panel

**Tools, Frameworks, and Libraries:**

* **Frontend:** React.js, Bootstrap, Axios
* **Backend:** Node.js (Express)
* **Database:** MySQL
* **Authentication:** JWT
* **AI Chatbot:** OpenAI API or Rasa (for basic NLP)
* **Deployment:** AWS
* **Design:** Figma for UI mock-ups

**12-Week Project Timeline**

| **Week** | **Focus Area** | **Tasks** | **Milestone/Deliverables** |
| --- | --- | --- | --- |
| Week 1 | Project Kickoff | Define scope, assign roles, create Git repo, set communication plan | Project Plan, GitHub repository set up |
| Week 2 | Research & Design Planning | Competitor analysis, design brainstorming, finalize tech stack | Tool/framework selection, Figma wireframes started |
| Week 3 | UI/UX Design | Design Signup, Login, About, Dashboard pages in Figma | Final UI wireframes/mockups |
| Week 4 | Frontend Setup & Initial Pages | Setup React project, create Navbar, Signup/Login/About pages | Initial frontend interface |
| Week 5 | Role-based Access & Routing | Implement user roles (User/Counselor/Admin), setup routing | Functional navigation and role separation |
| Week 6 | Backend Setup | Setup backend server (Node.js/Django), connect database | Backend boilerplate ready, user model created |
| Week 7 | Feature Integration (Chatbot & Sessions) | Integrate AI chatbot (basic), start therapy session module | Working chatbot (MVP), session schema in backend |
| Week 8 | Continue Development (Dashboard & Admin) | Build user dashboard, admin features, progress tracking | Dashboard, admin panel functional |
| Week 9 | Full-stack Integration | Connect frontend and backend, API testing | Data flow between client and server |
| Week 10 | Testing & Debugging | Unit testing, bug fixes, validation checks | Stable and testable build |
| Week 11 | Deployment & Optimization | Host app on Firebase/Render, UI polish, performance tuning | Live app deployment |
| Week 12 | Documentation & Final Presentation | Prepare final report, walkthrough, user manual, team presentation | Project report, final presentation ready |
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**Identify Risks**

| **Risk** | **Mitigation Strategy** |
| --- | --- |
| Chatbot complexity | Use a simple pre-trained model or rule-based bot first |
| Scheduling conflicts | Weekly team syncs and buffer in the timeline |
| Security and privacy concerns | Use HTTPS, encrypted tokens, data validation |

**Communication and Work Plan**

* **Weekly Meetings:** Sundays at 6 PM (Zoom/Google Meet)
* **Daily Coordination:** WhatsApp Group Chat
* **Progress Tracking:** Trello Board or GitHub Projects
* **Documentation & Sharing:** Google Docs & GitHub Wiki
* **Version Control:** Azure