

## Requirements Traceability Matrix

Req.	Requirement	Description	Design Artifacts
3.1.1	Login	Allow users to log in to the FYP Management System using university-provided credentials with role-based access	Activity Diagram 6, Sequence Diagram (Login), DFD L2 (Authentication), Use Case Diagram, Class Diagram (User)
3.1.2	Reset or Change Password	Allow users to reset forgotten passwords or change existing passwords with secure validation	Activity Diagram 6 (Alt Flow), Sequence Diagram (Forgot Password), DFD L2 (Authentication)
3.1.3	View and Update Personal Profile	Allow users to view and update their personal profile information including contact details	Use Case Diagram, DFD L0, Class Diagram (User attributes)
3.1.4	Receive System Notifications	Allow users to receive important notifications and announcements related to FYP activities based on their role	DFD L0, DFD L1, Class Diagram (Notification), Component Diagram (Notify)
3.2.1	Browse and Search Available Projects	Allow students to browse and search available FYP project ideas by title, domain, category, or supervisor	Use Case Diagram, DFD L2 (Project Management), Component Diagram (StudentPortal - Browse)
3.2.2	Project Proposal Submission and Management	Enable students to propose original project ideas or submit proposals for assigned projects with revision support	Activity Diagram 1, Sequence Diagram (Proposal), Use Case Diagram, DFD L2 (Project Management), Component Diagram (StudentPortal - Proposal), Class Diagram (Proposal)
3.3	Check Proposal Approval Status	Allow students to check the current status (Pending/Approved/Revision Required) of submitted project proposals	Activity Diagram 1, Use Case Diagram, DFD L2 (Project Management), Component Diagram (StudentPortal - Status)
3.3.1	Upload Project Documents	Enable students to upload various project-related documents (SRS, design docs, reports, final submissions)	Activity Diagram 2, Use Case Diagram, DFD L2 (Project Management), Component Diagram (DocMgr - Upload), Component Diagram (StudentPortal - Upload)
3.3.2	Replace Documents Within Deadlines	Allow students to replace previously submitted documents before submission deadlines with version control	Activity Diagram 2, DFD L2 (Project Management), Component Diagram (DocMgr - Replace)
3.4	View Project Milestone Deadlines	Display all project milestone deadlines defined by coordinators in chronological order	Activity Diagram 5, Use Case Diagram, DFD L2 (Project Management), Component Diagram (Milestones)

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3.4.1	View Comments from Supervisors	Allow students to view feedback and comments from supervisors, co-supervisors, and industrial mentors	Activity Diagram 2, Use Case Diagram, DFD L2 (Project Management), Component Diagram (StudentPortal - Comments), Class Diagram (Feedback)
3.5	View Evaluation Marks	Enable students to view evaluation marks for proposal, mid-term, and final defense evaluations	Activity Diagram 4, Use Case Diagram, DFD L2 (Evaluation Management), Component Diagram (StudentPortal - Marks)
3.6.1	View Assigned Project Groups	Allow supervisors to view all assigned project groups with member details, titles, and milestones	Use Case Diagram, DFD L2 (Project Management), Component Diagram (Supervisor - Groups), Class Diagram (Supervisor)
3.7	Review and Approve/Reject Documents	Enable supervisors to review, approve, reject, or request revisions for submitted project documents	Activity Diagram 2, Sequence Diagram (Review), Use Case Diagram, DFD L2 (Project Management), Component Diagram (Supervisor - Review)
3.7.1	Provide Comments on Submissions	Allow supervisors to provide detailed written feedback and comments on student submissions	Activity Diagram 2, Sequence Diagram (Review), Use Case Diagram, Component Diagram (Supervisor - Comments), Class Diagram (Feedback)
3.7.2	Access Student Submissions	Enable supervisors to access and download all submitted project documents from assigned groups	Activity Diagram 2, Use Case Diagram, DFD L2 (Project Management), Component Diagram (Supervisor - Access)
3.8.1	View Assigned Projects (Co-Supervisor)	Allow co-supervisors to view assigned projects and student groups with project details	Use Case Diagram, DFD L2 (Project Management), Component Diagram (CoSupervisor - Projects), Class Diagram (Co-Supervisor)
3.8.2	Access Student Submissions (Co-Supervisor)	Enable co-supervisors to access and review project submissions from assigned groups	Use Case Diagram, DFD L2 (Project Management), Component Diagram (CoSupervisor - Access)
3.8.3	Provide Feedback and Suggestions	Allow co-supervisors to provide constructive feedback and improvement suggestions on submissions	Activity Diagram 2, Use Case Diagram, Component Diagram (CoSupervisor - Feedback), Class Diagram (Feedback)
3.9.1	View All FYP Projects	Enable HoD to view all departmental FYP projects with filtering by title, supervisor, status, or members	Use Case Diagram, DFD L0, DFD L1, Component Diagram (HoD - AllProjects)
3.9.2	Approve Supervisor Assignments	Allow HoD to review and approve/modify supervisor and co-supervisor assignments to student groups	Activity Diagram 3, Sequence Diagram (Assignment), Use Case Diagram, DFD L2 (Project Management), Component Diagram (HoD - Assignments)

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3.9.3	Approve or Reject Projects	Enable HoD to approve or reject FYP project proposals based on departmental standards and policies	Activity Diagram 1, Use Case Diagram, DFD L2 (Project Management), Component Diagram (HoD - Approve)
3.10.1	View Assigned Projects for Evaluation	Allow evaluators to view the list of FYP projects assigned to them for assessment	Activity Diagram 4, Use Case Diagram, DFD L2 (Evaluation Management), Component Diagram (Evaluator - Projects)
3.10.2	Access Project Documents	Enable evaluators to securely access all project documents (proposals, reports, presentations)	Activity Diagram 4, Use Case Diagram, DFD L2 (Evaluation Management), Component Diagram (Evaluator - Docs)
3.10.3	View Evaluation Deadlines	Display evaluation deadlines and schedules in chronological order with reminders	Activity Diagram 4, Sequence Diagram (Evaluation), Use Case Diagram, DFD L2 (Evaluation Management)
3.10.4	Submit Evaluation Marks	Allow evaluators to submit scores, comments, and recommendations using predefined evaluation forms	Activity Diagram 4, Sequence Diagram (Evaluation), Use Case Diagram, DFD L2 (Evaluation Management), Component Diagram (Evaluator - Marks), Class Diagram (Evaluation)
3.10.5	View Evaluation Criteria	Enable evaluators to access detailed evaluation criteria, rubrics, and scoring guidelines	Activity Diagram 4, Use Case Diagram, DFD L2 (Evaluation Management)
3.11.1	Manage Student Groups	Enable coordinator to create/manage student groups with member assignments and complete project details	Use Case Diagram, DFD L1, DFD L2 (Project Management), Component Diagram (Coordinator - Groups), Class Diagram (Group, Project)
3.11.2	Manage FYP Timelines	Allow coordinator to create, update, and schedule project milestone deadlines with document requirements	Activity Diagram 5, Sequence Diagram (Milestone), Use Case Diagram, DFD L1, DFD L2 (Project Management), Component Diagram (Coordinator - Timeline), Class Diagram (Milestone)
3.11.3	Assign Evaluators and Schedules	Enable coordinator to assign internal/external evaluators to projects and create evaluation schedules	Activity Diagram 4, Sequence Diagram (Evaluation), Use Case Diagram, DFD L2 (Evaluation Management), Component Diagram (Coordinator - Evaluators)
3.11.4	Assign Supervisors	Allow coordinator to assign supervisors and co-supervisors to project groups with departmental validation	Activity Diagram 3, Sequence Diagram (Assignment), Use Case Diagram, DFD L2 (Project Management), Component Diagram (Coordinator - Supervisors)
3.11.5	Handle User Issues	Enable coordinator to manage and resolve FYP-related issues raised by all system users	Activity Diagram 7, Sequence Diagram (Issue), Use Case Diagram, DFD L2 (Issue Management), Component Diagram (Coordinator - Issues)
3.12.1	Full System Access	Provide super admin complete access to all modules, data, and administrative control functions	Use Case Diagram, DFD L0, DFD L2 (Role and Permission), Component Diagram (SuperAdmin - FullAccess)

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3.12.2	Manage Roles and Permissions	Enable super admin to assign, modify, or revoke user roles and permissions with module-level access control	Use Case Diagram, DFD L2 (Role and Permission), Component Diagram (SuperAdmin - Roles), Class Diagram (User with roles)
3.12.3	Create/Update/Delete Users	Allow super admin to perform complete user account management (create, update, delete) with credential assignment	Use Case Diagram, DFD L2 (Role and Permission), Component Diagram (SuperAdmin - Users), Class Diagram (User)
3.13.1	Usability (User-Friendly Interface)	System shall provide intuitive web-based interface with clear navigation and minimal steps to complete tasks	All Activity Diagrams, All Sequence Diagrams, Component Diagram (WebPortal), DFD L0 (External Entities)
3.13.2	Reliability (99% Availability)	System shall maintain 99% uptime with data integrity, backup, and recovery mechanisms	Component Diagram (Database), DFD L1 (Data Stores)
3.13.3	Performance (Response Time)	System shall respond to user requests within 2-5 seconds and support 2000+ concurrent users	All Sequence Diagrams (timing), Component Diagram (Architecture)
3.13.4	Scalability	System architecture shall support increasing users and projects without major redesign through modular design	Component Diagram (Modular), Class Diagram (OOD)
3.13.5	Security (Authentication & Authorization)	System shall implement role-based access control, encrypted data storage, and secure communication (HTTPS/TLS)	Activity Diagram 6, Sequence Diagram (Login), DFD L2 (Auth), DFD L2 (Role), Component Diagram (Security)