School of Computer Science Engineering and Information Systems

Winter Semester –2023-24

B.Tech IT – Capstone Project

0th Review

Register Number	20BIT0262
Student Name	Eshan Gupta
Project Domain (Capstone Project)	Web Development using NextJS
Project Title (Capstone Project)	DevOverFlow - An Advanced Q&A Platform with AI Integration
Abstract (Mini-200 Words)	**DevOverflow** is an ambitious capstone project aimed at creating a sophisticated Question and Answer (Q&A) platform, integrating the functionalities of StackOverflow and incorporating innovative features. The primary distinction lies in the implementation of AI-powered text generation, facilitated by OpenAI technology, to provide users with instant and accurate answers. The project leverages cutting-edge technologies, adopting NextJS version 13.5 as the core framework and MongoDB as the database. The presentation layer is meticulously crafted using Tailwind CSS for optimal styling. TypeScript is the language of choice, ensuring robust and maintainable code, with strategic use of React where applicable. The project's architecture is grounded in NextJS fundamentals, encompassing client-server dynamics, runtime versus build time considerations, and versatile rendering strategies like SSR, ISR, SSG, and CSR, ultimately ensuring superior load times. A comprehensive authentication system, encompassing user registration and login, along with distinct public and private routes, forms the backbone of user interaction. The backend infrastructure includes API routes, server-side form validation, and other essential features. Classic algorithms are implemented to create a robust recommendation system, a global database search functionality, and a reputation and badge system, fostering an engaging user experience. The platform promotes user-friendly interactions by allowing Markdown input for questions. Full responsiveness is a priority, ensuring seamless access

across diverse devices. Users can pose questions, receiving AI-generated answers alongside community responses. Active participation earns users badges and reputation points, contributing to an incentivized and dynamic knowledge-sharing ecosystem. In summary, **DevOverFlow** aspires to redefine Q&A platforms, combining AI innovation with a rich feature set for an unparalleled user experience.

Keywords	NextJS, Web Development, MongoDB, NodeJS, ExpressJS, Clerk, Tailwind CSS, StackOverflow clone, Text Generation using AI, MERN, React, Shadcn, Question and Answer (Q&A) platform, MarkDown
Company Name & Address **(For Off-campus students only)**	NA
External Memtor details **(For Off-campus students only)**	NA
Aprroval Status (for Guide)	YES / NO
Meeting date & Time	11/01/2024 & 2:00 P.M.
Student-Guide Interaction	Points discussed during the meeting • Discussed the point and the objective. • Suggested to carry out the literature review
Guide Name	Dr. SUGANYA P
Guide Signature	
Approval Date	5-Jan-2024