**Dr. Ambedkar Institute of Technology**

Department of Computer Science & Engineering

**Mini Project (21CSM607) Status**

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| **Mini project Id** | **B20** |
| **Title of the Project** | Decentralized NFT Minting and Marketplace Platform |

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| **USN** | **NAME** |
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| **Status of the Project (Brief about work**  **Completed)** | **Name and Signature of Guide** |
| The development of the online NFT marketplace using MongoDB, Express, Node.js, and React has reached a significant milestone with the successful completion of the backend phase. Here are the details:  **Backend Development:**   * **Server Setup**: The backend server has been set up using Express.js, providing a robust framework for building the application's API. * **Database Integration**: MongoDB has been integrated as the primary database, offering a flexible and scalable solution for storing user data and NFT information. * **Core Functionalities**:   + **User Authentication**: Implemented secure user authentication mechanisms, including registration, login, and token-based authentication to ensure user data protection.   + **NFT Creation**: Developed endpoints for users to create and mint NFTs, allowing them to upload digital assets and metadata. * **Security Measures**: Applied various security measures such as input validation, error handling, and secure storage of sensitive information using environment variables. * **Performance Optimization**: Optimized database queries and server responses to ensure efficient handling of user requests and smooth operation of the marketplace.   **Current Focus:**   * **Frontend Development**: The focus has now shifted to the frontend, where the React application is being finalized. This involves creating a user-friendly interface for browsing, buying, and selling NFTs. * **Integration**: Ensuring seamless integration between the frontend and backend to provide a smooth user experience. This includes connecting API endpoints with frontend components, handling user sessions, and displaying real-time data. * **Testing and Deployment**: Conducting thorough testing to identify and fix any issues, followed by deploying the application to a production environment for public use.   **Testing cases:**  Test Case 1: Verify that a new user can successfully register with a valid email and password.  Test Case 2: Ensure registration with an already existing email returns an appropriate error message.  Test Case 3: Test the creation of a new NFT by uploading a valid digital asset and metadata.  Test Case 4:Test the purchase of an NFT by a registered user with sufficient balance. | Dr. SMITHA SHEKAR B |