|  |  |  |  |
| --- | --- | --- | --- |
| **FSD MERN Evaluation Metrics** | | | |
| **Metrics** | **Sub-Evaluation Metrics & Scoring Criteria** | **Weightage** | **Total Score** |
| Project Initialization and Planning Phase | Define Problem Statements | 3 | 10 |
| Project Proposal (Proposed Solution) | 3 |
| Initial Project Planning Report | 4 |
| Requirements Gathering and Analysis Phase: | Solution Requirements | 2 | 10 |
| Solution Architecture | 2 |
| Technology Stack | 3 |
| Data Flow Diagrams & User stories | 3 |
| Front-End Development Phase | Frontend Development | 10 | 10 |
| Back-End Development Phase | Database Design and Development | 5 | 15 |
| API Development | 6 |
| Back-End Logic Implementation | 4 |
| Integration Phase | API Integration | 6 | 10 |
| Third-Party Service Integration | 2 |
| End-to-End Testing | 2 |
| Project Executable Files | Project Executable Files | 6 | 6 |
| Project Documentation | Project Documentation | 2 | 2 |
| Project Demonstration | Project Demonstration | 2 | 2 |
| Attendance | Attendance | 5 | 5 |
| Grand Assessment | Grand Assessment | 30 | 30 |
| **Overall** | | | **100** |
|  |  |  |  |
|  |  | **Total No. of Templates** | **12** |

**Project Initialization and Planning Phase:**

* **Define Problem Statements**
* **Project Proposal (Proposed Solution)**
* **Initial Project Planning**

**Requirements Gathering and Analysis Phase:**

* **Requirement Specification Document**:
  + Gather detailed functional and non-functional requirements.
  + Develop use cases and user stories.
* **Technology Stack Selection**:
  + Choose appropriate technologies for front-end, back-end, database, and deployment.
* **Architecture Design**:
  + Design system architecture diagrams (e.g., ERD, component diagram, sequence diagrams).
  + Define API specifications and data flow.

**Front-End Development Phase:**

* **Front-End Development**:
  + Develop the front-end application using chosen frameworks and libraries.
  + Implement responsive design and ensure cross-browser compatibility.

**Back-End Development Phase:**

* **Database Design and Development**: (report)
  + Design the database schema.
  + Implement the database using chosen DBMS.
* **API Development**: (report doc)
  + Develop RESTful or GraphQL APIs.
  + Ensure secure and efficient data handling.
* **Back-End Logic Implementation**:
  + Implement business logic and server-side functionality.
  + Handle authentication and authorization mechanisms.

**Integration Phase:**

* **API Integration**:
  + Integrate front-end with back-end APIs.
  + Ensure seamless data exchange and synchronization.
* **Third-Party Service Integration (optional)**:
  + Integrate with third-party services and APIs (e.g., payment gateways, social logins).
* **End-to-End Testing**: (Template)
  + Perform comprehensive testing covering the entire application flow.
  + Resolve integration issues and ensure smooth functionality.

**Project Documentation:**

* **Project Executable Files**
* **Project Documentation**
* **Project Demonstration**
* **Attendance**
* **Grand Assessment**