

**Functional Requirements Document for
Tamil Nadu Employment and Training
Portal**

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1. Document Control

1.1 Document Information

- **Document Title:** Functional Requirements Document (FRD)
- **Project Name:** Tamil Nadu Employment and Training Portal
- **Version:** 2.0
- **Date:** 27-04-2024
- **Author:** Kokul, Business Analyst
- **Approver:** Tamil Nadu Employment Department

1.2 Revision History

Version	Date	Author	Description
1.0	27-04-2024	Kokul	Initial Draft
1.1	05-05-2024	Kokul	Added detailed functional requirements
2.0	13-05-2024	Kokul	Enhanced FRD with use cases, data models, and UI specs

1.3 Distribution List

Role/Name	Department
Project Sponsor	Tamil Nadu Employment Department
Executive Office	Tamil Nadu Employment Department
Employer of Various Departments	Government Departments
Employee	Job Seekers
Intern	Skill Development Agency

Admin	Tamil Nadu Employment Department
Vendor Company: Sankee Private Limited	Vendor Department
Business Analyst: Kokul	Vendor Department

2. Introduction

2.1 Purpose

The purpose of this Functional Requirements Document (FRD) is to provide a comprehensive and detailed specification of the functionalities, behaviors, and interactions required for the development of the Tamil Nadu Employment and Training Portal. This document serves as a blueprint for the development team, ensuring that the final system aligns with the business objectives and user needs outlined in the Business Requirements Document (BRD).

2.2 Scope

The FRD encompasses all functional aspects of the Tamil Nadu Employment and Training Portal, including but not limited to:

- User Roles and Permissions
- Job and Internship Postings Management
- Profile Management for Employees and Interns
- Training Program Management by the Skill Development Agency
- Notification Systems
- Search and Filter Functionalities
- Dashboard Interfaces
- Multilingual Support
- Social Media Integration
- Feedback Mechanisms

Exclusions:

- Advanced Applicant Tracking Systems (ATS)
- AI-driven Candidate Matching
- Mobile Application Development (only web-responsive design is included)
- External Third-party Integrations beyond initial social media platforms
- Advanced Analytics beyond basic metrics

2.3 Definitions, Acronyms, and Abbreviations

- **BRD:** Business Requirements Document
- **FRD:** Functional Requirements Document
- **FR:** Functional Requirement
- **NFR:** Non-Functional Requirement
- **AC:** Acceptance Criteria
- **UI:** User Interface
- **UX:** User Experience
- **GIGW:** Guidelines for Indian Government Websites and Apps
- **GDPR:** General Data Protection Regulation
- **TNSDA:** Tamil Nadu Skill Development Agency
- **ATS:** Applicant Tracking Systems

2.4 References

- **Business Requirements Document (BRD):** Comprehensive requirements for the Tamil Nadu Employment and Training Portal.
- **IEEE 830-1998 Standard:** IEEE Standard for Software Requirements Specifications.
- **GIGW Guidelines:** Standards for Indian Government Websites and Apps.

2.5 Overview

This FRD is structured to provide detailed functional specifications for each component of the Tamil Nadu Employment and Training Portal. It includes descriptions of user interactions, system behaviors, data management, use cases, data flow diagrams, user interface specifications, and technical requirements to ensure a clear and actionable guide for developers, testers, and other stakeholders.

3. Overall Description

3.1 Product Perspective

The Tamil Nadu Employment and Training Portal is a standalone, web-based application designed to streamline recruitment and training processes within Tamil Nadu. It serves as a centralized platform connecting employers, employees, interns, and the Skill Development Agency, facilitating efficient job postings, applications, internship opportunities, and training program management.

3.2 Product Functions

- **User Account Management:** Registration, login, profile creation, and management for different user roles.
- **Job and Internship Postings:** Creation, editing, deletion, and management of job and internship listings by employers.
- **Application Management:** Submission, tracking, and management of job and internship applications by employees and interns.
- **Training Program Management:** Creation, scheduling, enrollment, and tracking of training programs by the Skill Development Agency.
- **Notifications:** Email alerts for application statuses, training program updates, and other relevant activities.
- **Search and Filter:** Advanced search functionalities for jobs, internships, and training programs based on various criteria.
- **Dashboards:** User-specific dashboards for managing postings, applications, and training programs.
- **Multilingual Support:** Interface available in Tamil and English.
- **Social Media Integration:** Sharing job and internship listings on platforms like LinkedIn.
- **Feedback Mechanism:** Users can report issues or suggest improvements.

3.3 User Classes and Characteristics

- **Employer of Various Departments:**
 - **Roles:** Post job and internship listings, manage applications.
 - **Characteristics:** Organizational users with recruitment needs.

- **Employee:**
 - **Roles:** Register, create profiles, search and apply for jobs.
 - **Characteristics:** Individuals seeking full-time employment.
- **Intern:**
 - **Roles:** Register, create profiles, search and apply for internships, enroll in training programs.
 - **Characteristics:** Students or individuals seeking internship opportunities.
- **Skill Development Agency:**
 - **Roles:** Manage training programs, enroll participants, track progress.
 - **Characteristics:** Administrators overseeing skill development initiatives.
- **Admin:**
 - **Roles:** Oversee all portal operations, manage user accounts, enforce permissions.
 - **Characteristics:** Super users with comprehensive access and control.

3.4 Operating Environment

- **Hardware:** Standard web servers with sufficient capacity to handle expected user traffic.
- **Software:** Web application built using modern frameworks compatible with major browsers (Chrome, Firefox, Safari).
- **Other Requirements:** Reliable internet connectivity, secure hosting environment, compliance with data protection standards.

3.5 Design and Implementation Constraints

- **Time:** Must be completed within an 8-month timeframe.
- **Resources:** Additional resources may be required for accurate translations and localization for multilingual support.
- **Integration:** Training program management features must integrate seamlessly with existing Skill Development Agency processes.

3.6 User Documentation

- **User Manuals:** Detailed guides for each user role.
- **Online Help:** Contextual help available within the portal.

3.7 Assumptions and Dependencies

- **Internet Access:** Users have basic internet access and digital literacy.
- **Data Accuracy:** Employers and Skill Development Agency will provide accurate and up-to-date information.
- **Infrastructure:** Existing infrastructure can support the new portal without significant upgrades.
- **Language Preference:** Users will primarily access the portal in Tamil and English.

4. Detailed Functional Requirements

4.1 User Roles and Permissions

4.1.1 Employer of Various Departments

FR1: Secure Account Creation and Login

- **Description:** Employers shall be able to create an account and log in securely using a username and password.
- **Inputs:** Employer's email address, password, department details.
- **Processing:** Validate email format, enforce password strength, store encrypted credentials.
- **Outputs:** Account creation confirmation, login success or failure messages.
- **Dependencies:** User Authentication Module.
- **Priority:** High
- **Acceptance Criteria:**
 - Employers can create an account with valid credentials.
 - Employers receive appropriate error messages for invalid inputs.
 - Successful login redirects employers to their dashboard.

FR2: Job and Internship Postings Management

- **Description:** Employers shall be able to post, edit, and delete job and internship listings specific to Tamil Nadu.
- **Inputs:** Job Title, Job Description, Internship Details, Location, Salary Range, Application Deadline, Required Qualifications.

- **Processing:** Validate input data, store listings in the database, update listings in real-time.
- **Outputs:** Confirmation messages upon successful posting, error messages for invalid inputs.
- **Dependencies:** FR1, Notifications System.
- **Priority:** High
- **Acceptance Criteria:**
 - Employers can successfully create, edit, and delete job and internship listings.
 - Listings are immediately visible in search results upon creation or editing.
 - Employers receive confirmation upon successful actions.

FR3: Dashboard Access for Managing Postings and Applications

- **Description:** Employers shall have access to a dashboard to manage their postings and review applications.
- **Inputs:** User interactions (e.g., selecting a job listing, viewing applications).
- **Processing:** Retrieve and display relevant data from the database.
- **Outputs:** Dynamic dashboard displaying current job/internship postings and received applications.
- **Dependencies:** FR1, FR2.
- **Priority:** High
- **Acceptance Criteria:**
 - Employers can view all their postings in the dashboard.
 - Employers can access detailed views of applications received for each posting.

FR4: Notification of New Applications

- **Description:** Employers shall receive notifications when new applications are submitted for their postings.
- **Inputs:** New application submissions.
- **Processing:** Trigger email notifications to employers upon application submission.
- **Outputs:** Email alerts notifying employers of new applications.
- **Dependencies:** FR2, Email Notification System.
- **Priority:** Medium
- **Acceptance Criteria:**

- Employers receive email notifications promptly upon new application submissions.
- Notifications contain relevant application details.

4.1.2 Employee

FR5: Employee Registration and Profile Management

- **Description:** Employees shall be able to register, create, and manage their profiles.
- **Inputs:** Personal information, contact details, resume upload.
- **Processing:** Validate and store employee data securely.
- **Outputs:** Profile creation confirmation, error messages for invalid inputs.
- **Dependencies:** User Authentication Module.
- **Priority:** High
- **Acceptance Criteria:**
 - Employees can successfully register and create profiles with required information.
 - Employees can update their profiles as needed.

FR6: Resume and Certification Upload

- **Description:** Employees shall be able to upload and update their resumes and relevant certifications.
- **Inputs:** Resume files (PDF, DOCX), certification documents.
- **Processing:** Validate file types and sizes, store files securely.
- **Outputs:** Confirmation of successful uploads, error messages for invalid files.
- **Dependencies:** FR5.
- **Priority:** High
- **Acceptance Criteria:**
 - Employees can upload resumes and certifications without issues.
 - The system restricts unsupported file types and enforces file size limits.

FR7: Job Search Functionality

- **Description:** Employees shall be able to search for jobs using keywords, location (within Tamil Nadu), and categories.
- **Inputs:** Search keywords, selected locations, job categories.

- **Processing:** Query the database based on search parameters, rank results.
- **Outputs:** List of relevant job postings matching search criteria.
- **Dependencies:** FR2, Search Module.
- **Priority:** High
- **Acceptance Criteria:**
 - Search results accurately reflect the entered criteria.
 - Pagination and sorting options are available for search results.

FR8: Job Application Submission

- **Description:** Employees shall be able to apply for jobs directly through the portal.
- **Inputs:** Selected job posting, application details (if any).
- **Processing:** Validate application data, associate with employee profile, notify employer.
- **Outputs:** Application submission confirmation, error messages for invalid applications.
- **Dependencies:** FR5, FR7.
- **Priority:** High
- **Acceptance Criteria:**
 - Employees can successfully submit applications for desired jobs.
 - Applications are correctly linked to the corresponding job postings and employee profiles.

FR9: Email Notifications for Application Status

- **Description:** Employees shall receive email notifications upon successful application submissions and status updates.
- **Inputs:** Application status changes.
- **Processing:** Trigger email notifications based on status changes.
- **Outputs:** Email alerts notifying employees of application status.
- **Dependencies:** Email Notification System.
- **Priority:** Medium
- **Acceptance Criteria:**
 - Employees receive timely notifications for application submissions and updates.
 - Emails contain accurate and relevant status information.

4.1.3 Intern

FR10: Intern Registration and Profile Management

- **Description:** Interns shall be able to register, create, and manage their profiles.
- **Inputs:** Personal information, contact details, academic records.
- **Processing:** Validate and store intern data securely.
- **Outputs:** Profile creation confirmation, error messages for invalid inputs.
- **Dependencies:** User Authentication Module.
- **Priority:** High
- **Acceptance Criteria:**
 - Interns can successfully register and create profiles with required information.
 - Interns can update their profiles as needed.

FR11: Resume, Academic Records, and Projects Upload

- **Description:** Interns shall be able to upload and update their resumes, academic records, and relevant projects.
- **Inputs:** Resume files (PDF, DOCX), academic transcripts, project descriptions.
- **Processing:** Validate file types and sizes, store files securely.
- **Outputs:** Confirmation of successful uploads, error messages for invalid files.
- **Dependencies:** FR10.
- **Priority:** High
- **Acceptance Criteria:**
 - Interns can upload resumes, academic records, and project details without issues.
 - The system restricts unsupported file types and enforces file size limits.

FR12: Internship Search Functionality

- **Description:** Interns shall be able to search for internship opportunities using keywords, location (within Tamil Nadu), and categories.
- **Inputs:** Search keywords, selected locations, internship categories.
- **Processing:** Query the database based on search parameters, rank results.
- **Outputs:** List of relevant internship postings matching search criteria.
- **Dependencies:** FR2, Search Module.

- **Priority:** High
- **Acceptance Criteria:**
 - Search results accurately reflect the entered criteria.
 - Pagination and sorting options are available for search results.

FR13: Internship Application Submission

- **Description:** Interns shall be able to apply for internships directly through the portal.
- **Inputs:** Selected internship posting, application details (if any).
- **Processing:** Validate application data, associate with intern profile, notify employer.
- **Outputs:** Application submission confirmation, error messages for invalid applications.
- **Dependencies:** FR10, FR12.
- **Priority:** High
- **Acceptance Criteria:**
 - Interns can successfully submit applications for desired internships.
 - Applications are correctly linked to the corresponding internship postings and intern profiles.

FR14: Email Notifications for Internship Application Status

- **Description:** Interns shall receive email notifications upon successful application submissions and status updates.
- **Inputs:** Application status changes.
- **Processing:** Trigger email notifications based on status changes.
- **Outputs:** Email alerts notifying interns of application status.
- **Dependencies:** Email Notification System.
- **Priority:** Medium
- **Acceptance Criteria:**
 - Interns receive timely notifications for application submissions and updates.
 - Emails contain accurate and relevant status information.

4.1.4 Skill Development Agency

FR15: Training Program Creation and Management

- **Description:** The Skill Development Agency shall be able to create, edit, and delete training programs.

- **Inputs:** Training Program Details (objectives, curriculum, duration), scheduling information.
- **Processing:** Validate training program data, store in the database, update program listings.
- **Outputs:** Confirmation messages upon successful creation/editing/deletion, error messages for invalid inputs.
- **Dependencies:** Training Management Module.
- **Priority:** High
- **Acceptance Criteria:**
 - Agencies can successfully create, edit, and delete training programs.
 - Training programs are immediately visible in the training program listings.

FR16: Intern Enrollment into Training Programs

- **Description:** The Skill Development Agency shall be able to enroll interns into training programs.
- **Inputs:** Intern profiles, training program selections.
- **Processing:** Associate intern data with selected training programs, update enrollment records.
- **Outputs:** Enrollment confirmation, error messages for invalid enrollments.
- **Dependencies:** FR10, FR15.
- **Priority:** High
- **Acceptance Criteria:**
 - Agencies can successfully enroll interns into training programs.
 - Enrolled interns receive notifications of their enrollment.

FR17: Tracking Participant Progress and Program Outcomes

- **Description:** The Skill Development Agency shall be able to track participant progress and program outcomes.
- **Inputs:** Participant performance data, progress metrics.
- **Processing:** Update and store progress data, generate reports.
- **Outputs:** Progress reports, performance dashboards.
- **Dependencies:** FR15, FR16.
- **Priority:** Medium

- **Acceptance Criteria:**
 - Agencies can accurately track and view participant progress.
 - Reports reflect real-time data and are accessible through the dashboard.

FR18: Reporting on Training Program Effectiveness and Feedback

- **Description:** The Skill Development Agency shall receive reports on training program effectiveness and participant feedback.
- **Inputs:** Training program data, participant feedback.
- **Processing:** Aggregate and analyze data, generate comprehensive reports.
- **Outputs:** Effectiveness reports, feedback summaries.
- **Dependencies:** FR15, FR17.
- **Priority:** Medium
- **Acceptance Criteria:**
 - Reports are generated accurately and reflect the true effectiveness of training programs.
 - Feedback is systematically collected and presented for analysis.

4.1.5 Admin

FR19: Comprehensive Oversight of User Roles and Permissions

- **Description:** The Admin shall oversee all user roles, manage portal settings, and enforce access permissions.
- **Inputs:** User role data, permission settings.
- **Processing:** Assign or revoke permissions, update role-based access controls.
- **Outputs:** Updated user permissions, access logs.
- **Dependencies:** User Management Module.
- **Priority:** High
- **Acceptance Criteria:**
 - Admins can successfully assign and revoke user roles and permissions.
 - Changes are reflected immediately in user access levels.

FR20: Comprehensive Control Over Portal Functionalities

- **Description:** The Admin shall have comprehensive control over the portal's functionalities, ensuring smooth operations.

- **Inputs:** System settings, configuration parameters.
- **Processing:** Modify system configurations, enable or disable features.
- **Outputs:** Confirmation messages for configuration changes, error messages for invalid changes.
- **Dependencies:** System Settings Module.
- **Priority:** High
- **Acceptance Criteria:**
 - Admins can successfully modify system settings without causing disruptions.
 - The portal maintains stability and functionality post-changes.

FR21: Access to Advanced Dashboards and Analytics

- **Description:** The Admin shall have access to advanced dashboards and analytics for monitoring portal activities and performance.
- **Inputs:** System activity data, performance metrics.
- **Processing:** Aggregate data, display in dashboard format.
- **Outputs:** Visual analytics dashboards, performance reports.
- **Dependencies:** Analytics Module.
- **Priority:** Medium
- **Acceptance Criteria:**
 - Admin dashboards display accurate and real-time analytics.
 - Reports can be generated and exported as needed.

FR22: User Account Management

- **Description:** The Admin shall manage user accounts, including role assignments and access permissions.
- **Inputs:** User account details, role assignments.
- **Processing:** Create, update, deactivate user accounts, assign roles.
- **Outputs:** Account creation confirmations, role assignment updates.
- **Dependencies:** User Management Module.
- **Priority:** High
- **Acceptance Criteria:**
 - Admins can successfully create, update, and deactivate user accounts.
 - Role assignments are accurately reflected in user access.

FR23: System Maintenance, Updates, and Troubleshooting

- **Description:** The Admin shall handle system maintenance, updates, and troubleshooting as necessary.
- **Inputs:** Maintenance schedules, system logs, error reports.
- **Processing:** Execute maintenance tasks, apply updates, resolve issues.
- **Outputs:** Maintenance logs, update confirmations, issue resolution reports.
- **Dependencies:** Maintenance Module, Support Tools.
- **Priority:** High
- **Acceptance Criteria:**
 - System maintenance is performed without causing significant downtime.
 - Updates are applied successfully and verified for functionality.
 - Issues are resolved promptly and effectively.

4.2 General Functional Requirements

FR24: Multilingual Support

- **Description:** The portal shall allow users to switch between Tamil and English languages seamlessly.
- **Inputs:** User language preference selection.
- **Processing:** Load interface elements in the selected language.
- **Outputs:** Displayed content in Tamil or English based on selection.
- **Dependencies:** Localization Module.
- **Priority:** High
- **Acceptance Criteria:**
 - Users can switch languages without page reloads or errors.
 - All interface elements are accurately translated and displayed.

FR25: Basic Analytics on Postings, Applications, and Enrollments

- **Description:** The system shall provide basic analytics on job/internship postings, applications, and training program enrollments.
- **Inputs:** Data on postings, applications, enrollments.
- **Processing:** Aggregate and analyze data.
- **Outputs:** Analytics dashboards, summary reports.

- **Dependencies:** Analytics Module.
- **Priority:** Medium
- **Acceptance Criteria:**
 - Analytics accurately reflect the underlying data.
 - Dashboards update in real-time or near real-time.

FR26: Social Media Integration for Sharing Listings

- **Description:** The portal shall support social media integration for sharing job and internship listings.
- **Inputs:** User action to share listings, selected social media platforms.
- **Processing:** Generate shareable links, interface with social media APIs.
- **Outputs:** Shared posts on selected social media platforms.
- **Dependencies:** Social Media Integration Module.
- **Priority:** Medium
- **Acceptance Criteria:**
 - Users can successfully share listings on supported social media platforms.
 - Shared content maintains formatting and accuracy.

FR27: Feedback Mechanism for Reporting Issues or Suggestions

- **Description:** The portal shall provide a feedback mechanism for users to report issues or suggest improvements.
- **Inputs:** User feedback submissions (issues, suggestions).
- **Processing:** Store feedback in the database, notify Admins.
- **Outputs:** Confirmation of feedback receipt, notifications to Admins.
- **Dependencies:** Feedback Module.
- **Priority:** Low
- **Acceptance Criteria:**
 - Users can submit feedback without errors.
 - Admins receive notifications of new feedback submissions.

5. Use Cases

5.1 Use Case 1: Employer Posts a Job Listing

- **Actor:** Employer of Various Departments
- **Preconditions:** Employer is logged into the portal.
- **Postconditions:** Job listing is created and visible to employees and interns.
- **Main Flow:**
 - Employer navigates to the "Post a Job" section.
 - Employer fills out the job posting form with required details.
 - Employer submits the job listing.
 - System validates the input data.
 - System stores the job listing in the database.
 - System confirms successful posting to the employer.
 - Job listing appears in the search results for relevant users.
- **Alternate Flows:**
 - **Invalid Input Data:**
 - If the employer submits incomplete or invalid data, the system displays appropriate error messages.
 - Employer corrects the errors and resubmits the form.

5.2 Use Case 2: Employee Applies for a Job

- **Actor:** Employee
- **Preconditions:** Employee is registered and logged into the portal.
- **Postconditions:** Application is submitted and visible to the employer.

- **Main Flow:**

- Employee searches for jobs using desired criteria.
- Employee selects a job listing to view details.
- Employee clicks the "Apply Now" button.
- System prompts employee to confirm the application.
- Employee confirms the application submission.
- System records the application and associates it with the employee's profile.
- System sends a confirmation email to the employee.
- Employer receives a notification of the new application.

- **Alternate Flows:**

- **Incomplete Profile:**
 - If the employee's profile is incomplete, the system prompts the employee to update necessary information before applying.

5.3 Use Case 3: Skill Development Agency Enrolls an Intern in a Training Program

- **Actor:** Skill Development Agency

- **Preconditions:** Intern is registered and has applied for a job or internship.

- **Postconditions:** Intern is enrolled in the selected training program.

- **Main Flow:**

- Agency accesses the training management dashboard.
- Agency selects an intern from the list of applicants.
- Agency chooses a training program to enroll the intern.
- System updates the intern's profile with training enrollment details.
- System sends a notification email to the intern confirming enrollment.
- System updates training program participant lists.

- **Alternate Flows:**
 - **Training Program Full:**
 - If the selected training program is full, the system notifies the agency and prompts to choose an alternative program.

5.4 Use Case 4: Admin Manages User Accounts

- **Actor:** Admin
- **Preconditions:** Admin is logged into the portal.
- **Postconditions:** User accounts are updated with new roles or permissions.
- **Main Flow:**
 - Admin navigates to the "User Management" section.
 - Admin searches for a specific user account.
 - Admin selects the user account to manage.
 - Admin updates the user's role or permissions as required.
 - System validates and applies the changes.
 - System confirms the successful update to the admin.
 - User experiences updated access levels immediately.
- **Alternate Flows:**
 - **Invalid Role Assignment:**
 - If the admin attempts to assign an invalid role, the system displays an error message and prevents the assignment.

6. System Workflows and Processes

6.1 Job Posting Workflow

1. Employer Authentication:

- Employer logs into the portal using secure credentials.

2. Access Job Posting Module:

- Employer navigates to the "Post a Job" section.

3. Fill Job Details:

- Employer enters job title, description, location, salary range, application deadline, and required qualifications.

4. Submit Job Posting:

- Employer submits the job posting form.

5. Data Validation:

- System validates the entered data for completeness and correctness.

6. Store Job Listing:

- Validated job listing is stored in the centralized database.

7. Notify Employer:

- System confirms successful job posting to the employer.

8. Display Listing:

- Job listing becomes searchable and visible to employees and interns.

6.2 Job Application Workflow

1. Employee Authentication:

- Employee logs into the portal using secure credentials.

2. Search for Jobs:

- Employee uses search filters to find relevant job listings.

3. Select Job Listing:

- Employee selects a job listing to view detailed information.

4. Apply for Job:

- Employee clicks "Apply Now" and confirms the application.

5. Application Submission:

- System records the application and associates it with the employee's profile.

6. Notify Employer:

- System sends a notification to the employer about the new application.

7. Confirm Application to Employee:

- System sends a confirmation email to the employee.

6.3 Training Program Enrollment Workflow

1. Agency Authentication:

- Skill Development Agency logs into the portal using secure credentials.

2. Access Training Management Module:

- Agency navigates to the "Training Programs" section.

3. Select Intern:

- Agency selects an intern from the list of applicants.

4. Enroll in Training Program:

- Agency chooses a training program and enrolls the intern.

5. Update Intern Profile:

- System updates the intern's profile with training enrollment details.

6. Notify Intern:

- System sends a notification email to the intern confirming enrollment.

7. Update Training Program Records:

- System updates the training program participant list.

7. Data Requirements

7.1 Data Sources

- **Data Source 1:** Employers and the Skill Development Agency input job, internship, and training program postings directly into the portal.
- **Data Source 2:** Employees and interns upload resumes, academic records, and personal information during registration.

7.2 Data Destination

All data will be stored in a centralized, secure relational database designed to handle user information, job/internship listings, training program details, and application data.

7.3 Data Fields

7.3.1 Employers

Data Field	Description
Department Name	The official name of the employer's department .
Job Title	The title of the job position being offered.
Job Description	A detailed description of the job role and duties.
Internship Details	Specific information regarding internship opportunities, including duration and objectives.

Location (within Tamil Nadu)	The geographical location of the job or internship within Tamil Nadu.
Salary Range	The compensation offered for the position.
Application Deadline	The final date by which applications must be submitted.
Required Qualifications	Necessary qualifications and skills for the position.

7.3.2 Employees

Data Field	Description
Name	Full name of the employee.
Contact Information	Email address, phone number, and other relevant contact details.
Resume	Uploadable resume file (e.g., PDF, DOCX).
Skills	List of relevant skills and competencies.
Work Experience	Detailed history of previous employment and roles.
Education	Educational background, including degrees and institutions attended.
Preferred Job Locations within Tamil Nadu	Specific areas within Tamil Nadu where the employee prefers to work.
Certifications	Relevant certifications held by the employee.

7.3.3 Interns

Data Field	Description
Name	Full name of the intern.
Contact Information	Email address, phone number, and other relevant contact details.
Resume	Uploadable resume file (e.g., PDF, DOCX).
Academic Records	Documentation of academic achievements and transcripts.
Projects	Description of relevant projects undertaken.
Skills	List of relevant skills and competencies.
Education	Educational background, including degrees and institutions attended.
Preferred Internship Locations within Tamil Nadu	Specific areas within Tamil Nadu where the intern prefers to undertake internships.
Academic Performance Metrics	GPA, class rank, and other performance indicators.

7.3.4 Skill Development Agency

Data Field	Description
Training Program Details	Comprehensive information about each training program, including objectives, curriculum, and duration.
Participant Enrollments	Data on interns enrolled in each training program.
Progress Tracking Data	Metrics and indicators tracking the progress and performance of participants.
Training Materials	Uploadable content related to training programs (e.g., slides, videos).
Feedback Records	Participant feedback on training programs.

7.3.5 Admin of Employment Department

Data Field	Description
User Account Details	Information related to all user accounts, including usernames, passwords, and contact information.
Role Assignments	Data defining user roles and permissions within the portal.
System Logs	Records of system activities, user actions, and events for monitoring and auditing purposes.
Configuration Settings	Portal-wide settings and preferences.
Audit Trails	Detailed logs of administrative actions for compliance and security.

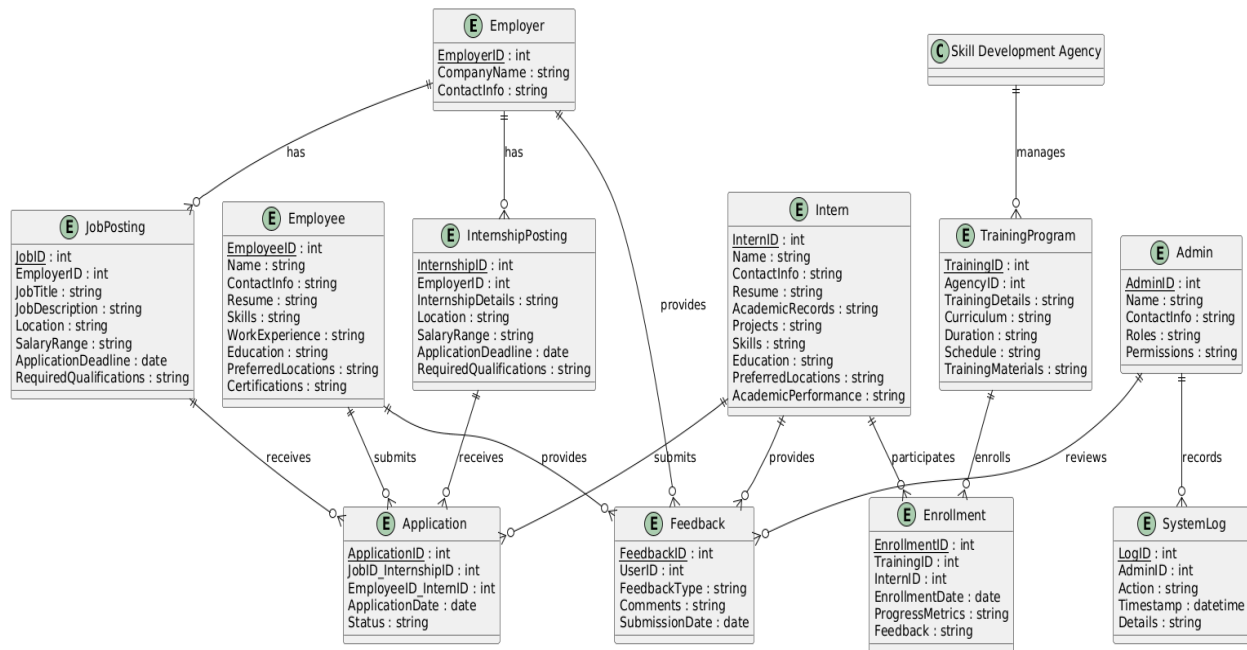
8. Data Models

8.1 Entity-Relationship Diagram (ERD)

- **Entities:**
 - **Employer**
 - Attributes: EmployerID, CompanyName, ContactInfo, etc.
 - **Employee**
 - Attributes: EmployeeID, Name, ContactInfo, Resume, Skills, WorkExperience, Education, PreferredLocations, Certifications, etc.
 - **Intern**
 - Attributes: InternID, Name, ContactInfo, Resume, AcademicRecords, Projects, Skills, Education, PreferredLocations, AcademicPerformance, etc.
 - **JobPosting**
 - Attributes: JobID, EmployerID, JobTitle, JobDescription, Location, SalaryRange, ApplicationDeadline, RequiredQualifications, etc.
 - **InternshipPosting**
 - Attributes: InternshipID, EmployerID, InternshipDetails, Location, SalaryRange, ApplicationDeadline, RequiredQualifications, etc.
 - **TrainingProgram**
 - Attributes: TrainingID, AgencyID, TrainingDetails, Curriculum, Duration, Schedule, TrainingMaterials, etc.
 - **Application**
 - Attributes: ApplicationID, JobID/InternshipID, EmployeeID/InternID, ApplicationDate, Status, etc.
 - **Enrollment**
 - Attributes: EnrollmentID, TrainingID, InternID, EnrollmentDate, ProgressMetrics, Feedback, etc.
 - **Admin**
 - Attributes: AdminID, Name, ContactInfo, Roles, Permissions, etc.
 - **Feedback**
 - Attributes: FeedbackID, UserID, FeedbackType, Comments, SubmissionDate, etc.

- **SystemLog**

- Attributes: LogID, AdminID, Action, Timestamp, Details, etc.



8.2 Data Flow Diagrams (DFD)

8.2.1 Level 0 DFD: High-Level Data Flow

1. **User Interaction:**

- Employers, Employees, Interns, and Skill Development Agency interact with the portal through the UI.

2. **System Processes:**

- User Authentication
- Job/Internship Posting Management
- Application Management
- Training Program Management
- Notification System
- Feedback Mechanism

3. **Data Stores:**

- Centralized Database for storing all user data, postings, applications, training programs, and feedback.

4. **External Systems:**

- Email Servers for sending notifications
- Social Media Platforms for sharing listings

8.2.2 Level 1 DFD: Detailed Data Flow for Job Posting

1. **Employer Inputs Job Details:**

- Employer fills out the job posting form and submits it.

2. **System Validates Data:**

- Checks for completeness and correctness.

3. **Store Job Posting:**

- Validated job posting is stored in the JobPosting data store.

4. **Notify Employer:**

- System sends a confirmation email to the employer.

5. **Update Search Index:**

- Job posting becomes searchable for Employees and Interns.

9. User Interface (UI) and User Experience (UX) Specifications

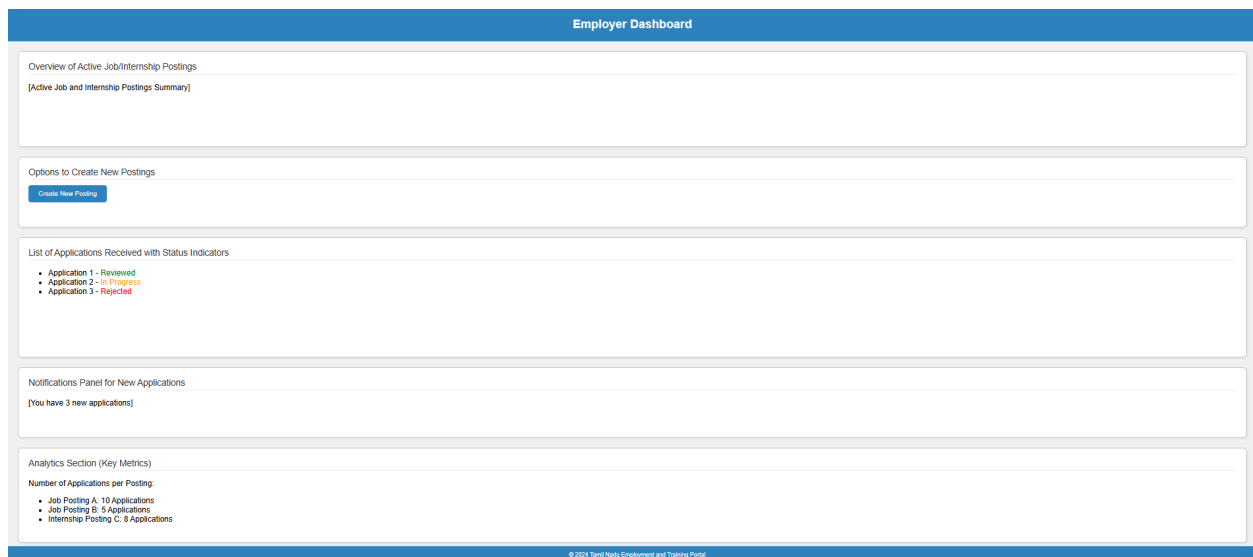
9.1 General UI Guidelines

- **Responsive Design:** Ensure the portal is accessible and usable on desktops, tablets, and mobile devices.
- **Intuitive Navigation:** Use clear labels and logical menu structures to facilitate easy navigation.
- **Consistency:** Maintain consistent design elements (colors, fonts, button styles) across all pages.
- **Accessibility:** Adhere to GIGW standards to ensure the portal is usable by individuals with disabilities.

9.2 Wireframes and Mockups

9.2.1 Employer Dashboard

- **Sections:**
 - Overview of active job/internship postings
 - Options to create new postings
 - List of applications received with status indicators
 - Notifications panel for new applications
 - Analytics section displaying key metrics (e.g., number of applications per posting)



9.2.2 Employee Dashboard

- **Sections:**
 - Profile overview with options to update information and upload resumes
 - Search bar with advanced filters (keywords, location, category)
 - List of applied jobs with status updates
 - Notifications panel for application confirmations and updates
 - Recommended jobs based on profile and preferences

9.2.3 Intern Dashboard

- **Sections:**
 - Profile overview with academic records and project details

- Search bar with advanced filters for internships
- List of applied internships with status updates
- Training program enrollment options
- Notifications panel for enrollment confirmations and training updates

9.2.4 Admin Dashboard

- **Sections:**
 - User management panel with search and role assignment features
 - System settings and configuration options
 - Access to advanced analytics and reports
 - Feedback and issue tracking system
 - Maintenance and troubleshooting tools

9.3 UI Behavior Specifications

- **Form Validations:** Implement real-time validations to provide immediate feedback on user inputs.
- **Dynamic Content Loading:** Use AJAX or similar technologies to load content without full page reloads.
- **Interactive Elements:** Ensure buttons, links, and interactive components provide visual feedback (e.g., hover effects, active states).
- **Error Handling:** Display user-friendly error messages and guidance for resolving input issues.

10. Technical Specifications

10.1 System Architecture

- **Frontend:**
 - **Technologies:** HTML5, CSS3, JavaScript, React.js or Angular for dynamic components.
 - **Frameworks:** Bootstrap or Material UI for responsive design.
- **Backend:**
 - **Technologies:** Node.js with Express.js, or Python with Django/Flask.

- **Database:** Relational database such as PostgreSQL or MySQL.
- **APIs:**
 - **Internal APIs:** For communication between frontend and backend services.
 - **External APIs:** LinkedIn API for social media integration, Email APIs (e.g., SendGrid) for notifications.
- **Security:**
 - **Authentication:** Implement OAuth 2.0 for secure user authentication.
 - **Authorization:** Role-based access control (RBAC) to manage user permissions.
 - **Data Protection:** Encrypt sensitive data both in transit (HTTPS) and at rest (AES-256).

10.2 Integration Points

- **LinkedIn Integration:**
 - **Purpose:** Allow users to share job and internship listings on LinkedIn.
 - **Method:** Utilize LinkedIn's API to generate shareable links and embed sharing buttons within job/internship listings.
- **Email Notification System:**
 - **Purpose:** Send automated email notifications for various events (e.g., application submissions, status updates).
 - **Method:** Integrate with an email service provider (e.g., SendGrid, Mailgun) via their APIs.

10.3 Security Measures

- **Authentication Mechanisms:**
 - Implement secure login with hashed passwords.
 - Enforce strong password policies (minimum length, complexity requirements).
 - Enable multi-factor authentication (MFA) for enhanced security.
- **Data Encryption:**
 - Use HTTPS for all data transmissions.
 - Encrypt sensitive data in the database using industry-standard encryption algorithms.
- **Access Control:**

- Implement role-based access control to restrict access to sensitive functionalities and data.
- **Audit Logging:**
 - Maintain detailed logs of all administrative actions and system events for auditing purposes.
- **Regular Security Audits:**
 - Conduct periodic security assessments to identify and mitigate vulnerabilities.

10.4 Performance Considerations

- **Scalability:**
 - Design the system to handle increased user traffic and data volume.
 - Implement load balancing and horizontal scaling strategies as needed.
- **Optimization:**
 - Optimize database queries for faster data retrieval.
 - Utilize caching mechanisms (e.g., Redis) to reduce server load and improve response times.

10.5 Technology Stack

- **Frontend:** React.js, Bootstrap
- **Backend:** Node.js with Express.js
- **Database:** PostgreSQL
- **APIs:** RESTful APIs for internal and external integrations
- **Hosting:** AWS or Azure cloud services with scalable infrastructure

11. Acceptance Criteria

- **AC1:** Employers can successfully create accounts and post job and internship listings without errors.
- **AC2:** Employees and interns can register, create profiles in Tamil and English, upload resumes, and apply for jobs and internships seamlessly.
- **AC3:** The search functionality returns relevant job and internship listings based on user queries specific to Tamil Nadu.

- **AC4:** Email notifications are sent promptly upon job/internship application submissions and status updates.
- **AC5:** The administrative dashboard allows for efficient management of job/internship postings, training programs, and user accounts.
- **AC6:** The portal performs consistently across supported web browsers and devices.
- **AC7:** All user data is stored securely and access is restricted based on user roles.
- **AC8:** Multilingual support functions correctly, allowing users to switch between Tamil and English interfaces without issues.
- **AC9:** Compliance with GDPR and Indian data protection laws is verified through audits.
- **AC10:** Skill Development Agency can create, manage, and track training programs effectively.
- **AC11:** Admins can manage all aspects of the portal, including user accounts and training programs, efficiently.
- **AC12:** Social media integration allows users to share job and internship listings seamlessly.
- **AC13:** Users with disabilities can navigate and use the portal without barriers, adhering to GIGW standards.
- **AC14:** System response times are within the specified performance requirements (less than 3 seconds).
- **AC15:** The system achieves 99.5% uptime, excluding scheduled maintenance periods.

12. Non-Functional Requirements

12.1 Performance Requirements

- **NFR1:** The portal shall have a response time of less than 3 seconds for any user action.
- **NFR2:** The system shall be available 99.5% of the time, excluding scheduled maintenance.

12.2 Security Requirements

- **NFR3:** User data shall be stored securely and comply with relevant data protection regulations, including Tamil Nadu state guidelines.

- **NFR4:** Implement secure authentication mechanisms, including strong password policies and multi-factor authentication.
- **NFR5:** Maintain audit logs for all administrative actions within the portal.

12.3 Usability Requirements

- **NFR6:** The design shall be responsive to ensure usability on desktops, tablets, and mobile devices.
- **NFR7:** Support for Tamil and English languages to cater to a wider user base.
- **NFR8:** The system shall adhere to GIGW accessibility standards to ensure usability by individuals with disabilities.

12.4 Reliability & Availability

- **NFR9:** The system shall be reliable, ensuring minimal downtime and quick recovery from failures.
- **NFR10:** The portal shall support scalability to handle increased user traffic and data volume over time.

12.5 Maintainability

- **NFR11:** The system shall be modular, allowing for easy updates and maintenance.
- **NFR12:** Comprehensive documentation shall be provided for all system components to facilitate maintenance.

13. Detailed Functional Specifications

13.1 User Authentication Module

FR1: Secure Account Creation and Login

- **Description:** Enables employers, employees, interns, and admins to create accounts and log in securely.
- **Inputs:** User-specific registration details (e.g., email, password, role-specific information).
- **Processing:**

- Validate input data.
- Hash and encrypt passwords before storage.
- Authenticate users during login using secure protocols.
- **Outputs:** Success or error messages related to account creation and login.
- **Dependencies:** Database, Encryption Service.
- **Priority:** High
- **Acceptance Criteria:**
 - Users can register with valid details.
 - Users cannot register with duplicate email addresses.
 - Passwords are stored securely using hashing algorithms.
 - Users can log in with correct credentials and are denied access with incorrect credentials.

13.2 Job and Internship Management Module

FR2: Job and Internship Postings Management

- **Description:** Allows employers to create, edit, and delete job and internship postings.
- **Inputs:** Job details (title, description, location, salary, etc.).
- **Processing:**
 - Validate input data.
 - Store postings in the database.
 - Update search indexes for real-time availability.
- **Outputs:** Confirmation messages, updated job listings.
- **Dependencies:** Employer Dashboard, Database.
- **Priority:** High
- **Acceptance Criteria:**
 - Employers can perform CRUD (Create, Read, Update, Delete) operations on job and internship postings.
 - Changes are reflected immediately in the portal's listings.

13.3 Application Management Module

FR8: Job Application Submission

- **Description:** Enables employees to apply for jobs directly through the portal.
- **Inputs:** Application data linked to employee profiles.
- **Processing:**
 - Validate application data.
 - Link application to both employee and job posting records.
 - Notify employers of new applications.
- **Outputs:** Application submission confirmation.
- **Dependencies:** Employee Profiles, Job Postings, Notification System.
- **Priority:** High
- **Acceptance Criteria:**
 - Applications are successfully submitted and stored.
 - Employers receive notifications for new applications.

13.4 Training Program Management Module

FR15: Training Program Creation and Management

- **Description:** Enables the Skill Development Agency to manage training programs.
- **Inputs:** Training program details (objectives, curriculum, duration, etc.).
- **Processing:**
 - Validate training program data.
 - Store training programs in the database.
 - Update training program listings for intern visibility.
- **Outputs:** Confirmation messages, updated training program listings.
- **Dependencies:** Agency Dashboard, Database.
- **Priority:** High
- **Acceptance Criteria:**
 - Agencies can perform CRUD operations on training programs.
 - Training programs are immediately available for intern enrollment.

13.5 Notification System

FR4 & FR9: Notifications for Employers and Employees/Interns

- **Description:** Sends email notifications for various events (e.g., new applications, application status updates).
- **Inputs:** Trigger events (e.g., application submission, status change).
- **Processing:**
 - Generate notification content.
 - Use Email APIs to send emails.
- **Outputs:** Sent emails to respective users.
- **Dependencies:** Email Service Provider, Notification Settings.
- **Priority:** Medium
- **Acceptance Criteria:**
 - Notifications are sent promptly upon trigger events.
 - Emails contain accurate and relevant information.

13.6 Search and Filter Module

FR7 & FR12: Advanced Search Functionalities for Jobs and Internships

- **Description:** Provides users with advanced search capabilities to find relevant job and internship listings.
- **Inputs:** Search criteria (keywords, location, category).
- **Processing:**
 - Query the database based on criteria.
 - Rank and sort results accordingly.
- **Outputs:** Displayed search results matching criteria.
- **Dependencies:** Job and Internship Postings, Search Indexing.
- **Priority:** High
- **Acceptance Criteria:**
 - Search results accurately match the entered criteria.
 - Performance remains optimal even with large datasets.

13.7 Dashboard Interfaces

Employer Dashboard (FR3):

- **Components:**
 - Overview of active postings.
 - Tools to create/edit/delete postings.
 - List of received applications with status indicators.
 - Notifications panel for new applications.
 - Analytics displaying key metrics.

Employee Dashboard (FR5, FR8, FR9):

- **Components:**
 - Profile overview with editable sections.
 - Search bar with filters.
 - List of applied jobs with status updates.
 - Notifications panel for application confirmations and updates.
 - Recommended jobs based on profile.

Intern Dashboard (FR10, FR13, FR14):

- **Components:**
 - Profile overview with academic and project details.
 - Search bar with internship filters.
 - List of applied internships with status updates.
 - Training program enrollment options.
 - Notifications panel for enrollment confirmations and training updates.

Admin Dashboard (FR19-FR23):

- **Components:**
 - User management panel with search and role assignment features.
 - System settings and configuration options.
 - Access to advanced analytics and reports.
 - Feedback and issue tracking system.
 - Maintenance and troubleshooting tools.

13.8 Feedback Mechanism

FR27: Feedback Mechanism for Reporting Issues or Suggestions

- **Description:** Allows users to provide feedback on their experience or report issues.
- **Inputs:** Feedback type (issue/suggestion), comments.
- **Processing:**
 - Validate and categorize feedback.
 - Store feedback in the database.
 - Notify Admins of new feedback.
- **Outputs:** Confirmation of feedback receipt to users.
- **Dependencies:** Feedback Module, Notification System.
- **Priority:** Low
- **Acceptance Criteria:**
 - Users can submit feedback without errors.
 - Admins are notified of new feedback submissions.

14. Technical Architecture and System Design

14.1 Frontend Architecture

- **Framework:** React.js for building dynamic user interfaces.
- **State Management:** Redux or Context API for managing application state.
- **Styling:** CSS3 with Bootstrap for responsive design.
- **Routing:** React Router for handling navigation between different pages and components.

14.2 Backend Architecture

- **Framework:** Node.js with Express.js for handling server-side operations.
- **API Design:** RESTful APIs for communication between frontend and backend.
- **Database Interaction:** ORM (e.g., Sequelize for PostgreSQL) for database operations.
- **Authentication:** OAuth 2.0 and JWT (JSON Web Tokens) for secure user authentication and session management.

14.3 Database Design

- **Type:** Relational Database (PostgreSQL)
- **Schema Design:**
 - **Users Table:** Stores all user-related information with role differentiation.
 - **JobPostings Table:** Stores job and internship postings linked to employers.
 - **Applications Table:** Stores applications submitted by employees and interns.
 - **TrainingPrograms Table:** Stores details of training programs managed by the Skill Development Agency.
 - **Enrollments Table:** Tracks intern enrollments in training programs.
 - **Feedback Table:** Stores user feedback submissions.
 - **SystemLogs Table:** Logs all administrative and system activities for auditing.

14.4 Security Architecture

- **Data Encryption:** Utilize AES-256 for data at rest and TLS 1.2+ for data in transit.
- **Access Control:** Implement Role-Based Access Control (RBAC) to restrict functionalities based on user roles.
- **Input Validation:** Sanitize and validate all user inputs to prevent SQL injection, XSS, and other common vulnerabilities.
- **Regular Audits:** Conduct periodic security audits and vulnerability assessments to identify and mitigate potential threats.

14.5 Integration Points

- **Email Service Integration:** Use SendGrid API for sending automated emails.
- **LinkedIn API Integration:** Enable sharing of job and internship listings on LinkedIn.
- **Payment Gateway Integration:** (If applicable for premium features or services.)
- **Third-Party Authentication:** Allow users to log in using LinkedIn or other third-party services for enhanced convenience.

15. Testing and Validation

15.1 Testing Strategy

- **Unit Testing:** Verify individual components and functions work as intended.
- **Integration Testing:** Ensure different modules interact correctly.
- **System Testing:** Validate the complete and integrated system against the FRD.
- **User Acceptance Testing (UAT):** Conduct testing sessions with stakeholders to ensure the system meets business needs.
- **Performance Testing:** Assess system performance under various load conditions to ensure responsiveness and stability.
- **Security Testing:** Identify and rectify security vulnerabilities through penetration testing and code reviews.

15.2 Validation Criteria

- **Functionality:** All functional requirements are implemented correctly and operate as specified.
- **Performance:** The system meets or exceeds performance requirements (e.g., response time, uptime).
- **Usability:** The portal is user-friendly, intuitive, and accessible to all intended users.
- **Security:** The system adheres to all security requirements and best practices.
- **Compliance:** The portal complies with relevant regulations, including GDPR and Indian data protection laws.

16. Deployment and Maintenance

16.1 Deployment Plan

- **Staging Environment:** Set up a staging environment identical to the production environment for final testing.
- **Data Migration:** Execute the detailed data migration plan to transfer existing data to the new portal.

- **Go-Live:** Deploy the portal to the production environment during a scheduled maintenance window to minimize disruptions.
- **Post-Deployment Testing:** Conduct smoke testing to ensure all functionalities are operational post-deployment.
- **User Training:** Provide training sessions and materials for all user roles to facilitate smooth adoption.

16.2 Maintenance Plan

- **Regular Updates:** Schedule periodic updates for system enhancements, security patches, and bug fixes.
- **Monitoring:** Continuously monitor system performance, security, and user activity to identify and address issues proactively.
- **Support:** Establish a support system for users to report issues and receive assistance promptly.
- **Backup and Recovery:** Implement regular data backups and a disaster recovery plan to prevent data loss and ensure business continuity.

17. Appendices

17.1 Appendix A: Glossary

Term/Acronym	Definition
BRD	Business Requirements Document
FRD	Functional Requirements Document
GDPR	General Data Protection Regulation
FR	Functional Requirement
NFR	Non-Functional Requirement
AC	Acceptance Criteria
UI	User Interface

UX	User Experience
TNSDA	Tamil Nadu Skill Development Agency
GIGW	Guidelines for Indian Government Websites and Apps
ATS	Applicant Tracking Systems
API	Application Programming Interface
ERD	Entity-Relationship Diagram
DFD	Data Flow Diagram
CRUD	Create, Read, Update, Delete

17.2 Appendix B: Detailed Use Cases

(Detailed use cases have been included in section 5.)

17.3 Appendix C: Data Migration Plan

Data Migration Steps:

1. Data Assessment and Extraction

- **Objective:** Evaluate current data sources and extract necessary data.
- **Steps:**
 - Identify all existing data repositories (e.g., spreadsheets, databases).
 - Assess data quality, including completeness and accuracy.
 - Use data extraction tools to export data in compatible formats (e.g., CSV, JSON).

2. Data Cleansing and Transformation

- **Objective:** Enhance data quality and prepare it for the new portal.
- **Steps:**

- Remove duplicate records and rectify incomplete entries.
- Standardize data formats (e.g., date formats, capitalization).
- Map existing data fields to the new portal's data schema and perform necessary transformations.

3. Data Loading and Validation

- **Objective:** Import and verify data integrity in the new system.
- **Steps:**
 - Use data import tools or scripts to load data into the portal.
 - Conduct sample checks to ensure data integrity post-migration.
 - Implement encryption and access controls to secure migrated data, ensuring compliance with GDPR and Indian data protection laws.

17.4 Appendix D: Risk Management Plan

Identified Risks and Mitigation Strategies:

1. Data Security Risks

- **Description:** Unauthorized access to sensitive user data.
- **Impact:** High
- **Mitigation Strategies:**
 - Implement robust encryption for data in transit and at rest.
 - Enforce strong password policies and multi-factor authentication.
 - Conduct regular security audits and vulnerability assessments.

2. Scope Creep and Timeline Delays

- **Description:** Uncontrolled changes to project scope leading to delays.
- **Impact:** High
- **Mitigation Strategies:**
 - Clearly define and document the project scope in the BRD.
 - Establish a formal change request process requiring stakeholder approval.
 - Utilize agile methodologies to manage and adapt to changes efficiently.

3. User Adoption and Compliance Risks

- **Description:** Low adoption rates among target users and non-compliance with regulations.
- **Impact:** Medium to High
- **Mitigation Strategies:**
 - Conduct comprehensive user training sessions and provide ongoing support.
 - Gather and incorporate user feedback to enhance portal usability.
 - Ensure regular compliance checks and stay updated with GDPR and local Tamil Nadu regulations.

4. Technical Risks

- **Description:** Integration failures with external systems or APIs.
- **Impact:** Medium
- **Mitigation Strategies:**
 - Conduct thorough testing of all integration points.
 - Maintain clear documentation for API usage and dependencies.
 - Establish fallback mechanisms in case of integration failures.

5. Performance Risks

- **Description:** Portal performance degrades under high user load.
- **Impact:** Medium
- **Mitigation Strategies:**
 - Implement load balancing and caching strategies.
 - Optimize database queries and server configurations.
 - Conduct performance testing to identify and address bottlenecks.

18. Approval Signatures

Role	Name	Signature	Date
Project Sponsor	Tamil Nadu Employment Department		
Business Analyst	Kokul		
Vendor Company Representative	Simon		
Admin	Ravi		

19. Change Management Plan

19.1 Purpose

To manage changes to the project scope, requirements, and deliverables for the Tamil Nadu Employment and Training Portal, ensuring minimal disruptions and alignment with project objectives.

19.2 Scope

Covers changes related to:

- **Requirements and Deliverables:** Modifications to functional and non-functional requirements or project outputs.
- **Timelines and Milestones:** Adjustments to project schedules and key milestones.
- **Budget and Resources:** Reallocations or changes in financial and human resources.
- **Feature Additions or Removals:** Enhancements or deletions of system functionalities.

19.3 Change Process

1. Submission:

- Stakeholders submit a Change Request Form (CRF) detailing the proposed change.

2. Review:

- The Project Manager logs and assesses the CRF for validity and relevance.

3. Impact Analysis:

- The Business Analyst evaluates the change's effects on scope, timeline, and budget.

4. Approval:

- The Change Control Board (CCB) reviews the analysis and decides to approve or reject the change.

5. Implementation:

- Approved changes are integrated into the project plan and communicated to all stakeholders.

6. Closure:

- The Business Analyst verifies the change meets objectives and updates documentation accordingly.

19.4 Roles and Responsibilities

● Project Manager:

- Oversees the change process.
- Maintains the Change Register.
- Communicates updates to stakeholders.

- **Change Control Board (CCB):**
 - Reviews and approves or rejects change requests.
- **Business Analyst:**
 - Conducts impact analyses.
 - Documents changes.
- **Stakeholders:**
 - Propose changes.
 - Provide feedback.

19.5 Communication

- **Updates:** Changes are discussed in weekly meetings and included in status reports.
- **Notifications:** Stakeholders are informed immediately of change approvals or rejections.
- **Access:** Change documentation is shared via project management tools.

19.6 Monitoring

- **Track Changes:** Monitor and log all changes in the Change Register.
- **Review:** Regularly assess the effectiveness of the Change Management Plan and make necessary adjustments.

20. Conclusion

This Functional Requirements Document (FRD) provides a detailed specification of the functionalities, system behaviors, and technical specifications required for the development of the Tamil Nadu Employment and Training Portal. By adhering to this FRD, the development team can ensure that the portal meets the business objectives, user needs, and compliance standards outlined in the Business Requirements Document (BRD). The successful implementation of this portal will streamline recruitment and training processes, enhance employment opportunities, and contribute to the economic growth of Tamil Nadu.