

Business Requirements Document

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PROJECT OVERVIEW

OBJECTIVES In many organizations, the Learning & Development (L&D) department faces the challenge of managing and tracking employee training programs, certifications, and development progress. With multiple ongoing programs, it becomes difficult to measure the effectiveness of training, track employee engagement, or align learning initiatives with the company's strategic goals. A comprehensive system is needed to manage training schedules, track progress, automate certification processes, and provide insightful reports on employee development and skill enhancement.

OBJECTIVES

1. Streamline Training Requirements: Provide an intuitive interface for managers to submit training requests and requirements.
2. Automate Baseline Assessments: Use generative AI to automatically generate relevant assessment questions.
3. Dynamic Batching: Divide employees into training batches based on their performance to tailor training duration and content.
4. Cost Optimization: Reduce overall training costs by minimizing unnecessary training durations for advanced employees and personalizing training paths.

SCOPE

Development of a UI for gathering training requirements. Integration of OpenAI for automatic baseline assessment generation. Evaluation of employee performance using both automated code evaluation and manual review for subjective tasks. Automated dynamic batch creation based on performance scores.

KEY FEATURES AND REQUIREMENTS

1. Training Requirement Form: User-friendly form for managers to submit their training needs. Mandatory fields for training type, duration, audience, and outcomes.
2. Automated Baseline Assessment: Use of generative AI (OpenAI API) to create assessment questions.
3. Employee Batching Employees will be dynamically divided into batches based on their baseline assessment scores. The system will optimize training duration for each batch based on skill level.
4. Assessment Evaluation: Automatic evaluation of coding or written responses. AI-driven evaluation for open-ended questions or manual grading where necessary.

FUNCTIONAL REQUIREMENTS

Frontend:

- a. Developed using React and TypeScript.
- b. Form validation for training requirements input.
- c. Dashboard displaying training requests, progress, and batch formation in real-time.

Backend:

- a) Developed using Node.js and microservices architecture.
- b) Requirement Management Microservice: Handles form submissions for training requests.
- c) Assessment Generation Microservice: Generates assessment questions using OpenAI.
- d) Evaluation Microservice: Handles evaluation of employee submissions (code and non-code tasks).
- e) Notification Microservice: Sends email notifications to employees and managers on training updates.
- f) Batching Microservice: Automates employee batch formation based on performance scores.

NON-FUNCTIONAL REQUIREMENTS

1. Performance: The platform should be able to handle up to 1000 simultaneous users with minimal latency. Assessments should be generated within 5 seconds of submission.
2. Scalability: The platform should scale to support increasing numbers of training requests and employees.
3. Security: User data should be encrypted in transit (HTTPS) and at rest. Role-based access control (RBAC) will be implemented to ensure only authorized users can access certain functionalities.
4. Reliability: The system should ensure high availability with 99.9% uptime.
5. Usability: The UI should be intuitive and easy to navigate for both technical and non-technical users

USER STORIES

1. As a Manager, I want to submit training requests through an online form, so I can streamline the process of requesting employee training.
2. As a Manager, I want to specify training duration, type, and target audience, so the platform can cater to specific training needs.
3. As an Employee, I want to receive a baseline assessment, so I can showcase my skill level before the training.
4. As an Employee, I want to be dynamically assigned to a training batch based on my performance, so I can receive training suitable for my skill level.
5. As a Training Administrator, I want to monitor the progress of all training batches through a dashboard, so I can track the efficiency of ongoing training.

STAKEHOLDERS

- **Primary Stakeholder:** The Head of L&D – the main point of contact for understanding training requirements and validating the platform's output.
- **Training Managers:** Departmental representatives who will submit training requests.
- **Employees:** Participants involved in baseline assessments and training programs.
- **IT Team:** Responsible for maintaining the platform after its launch.

TIMELINE

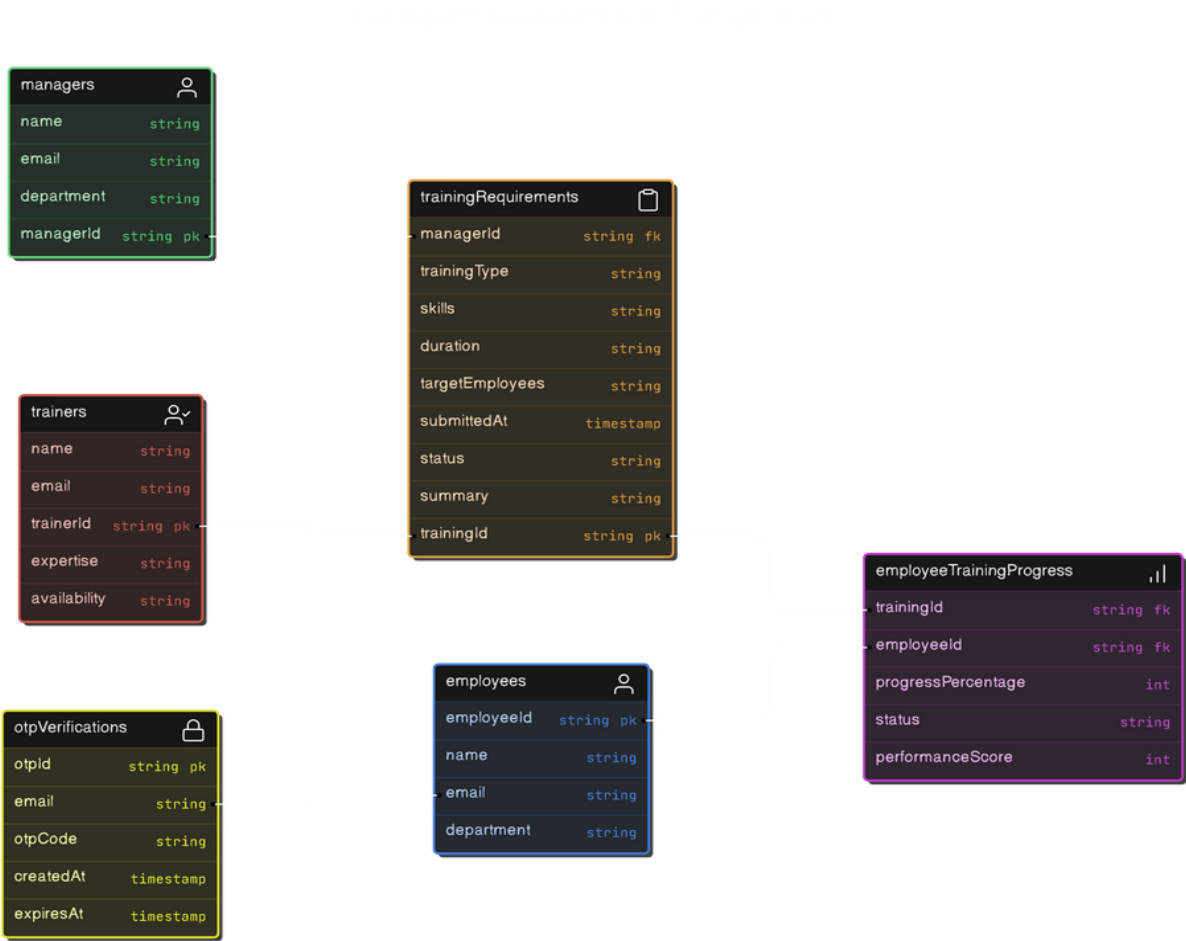
- Phase 1 Requirements Gathering & Planning UI Design and Database Schema Finalization
- Phase 2 Develop Frontend for Training Requirement Form Implement Backend Microservices: Requirement Management, Assessment Generation Integrate Evaluation Microservice for Baseline Assessments

- Phase 3 Finalize Dashboard and Notification System
Implement Automated Certificate Generation
- Phase 4 Testing Bug Fixes and Optimizations
Deployment and Final Review

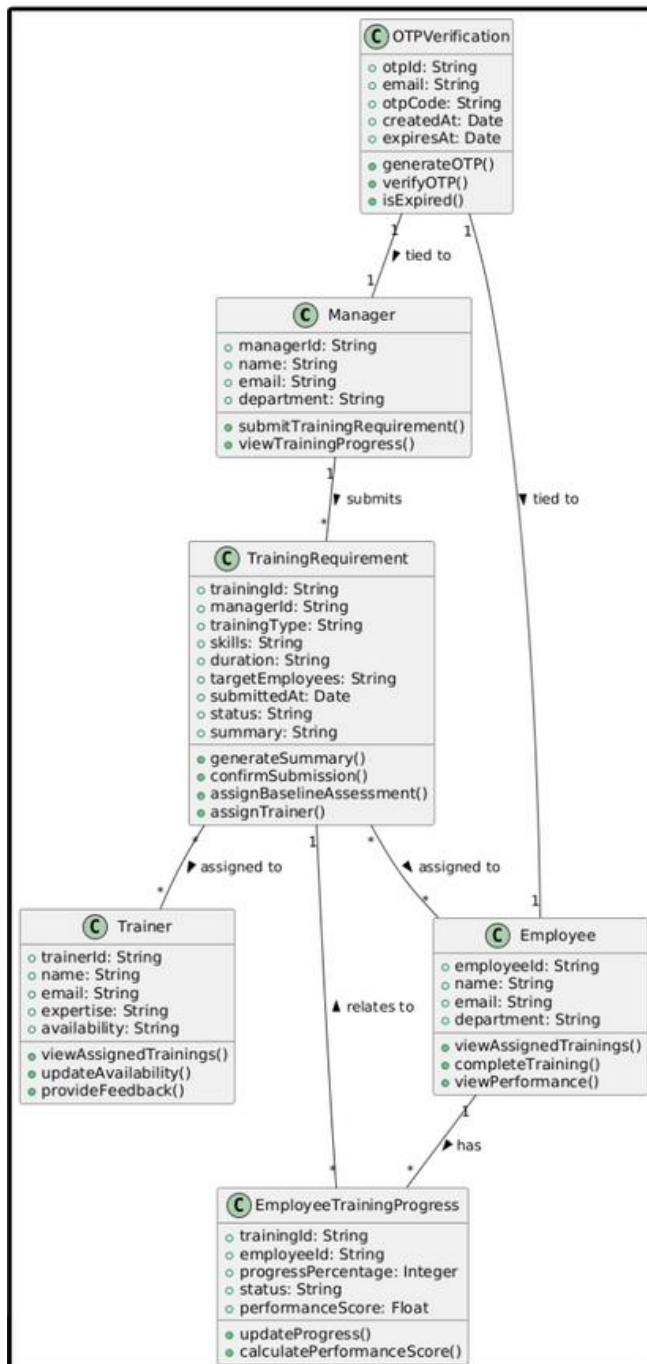
SUCCESS METRICS

1. **Reduced Training Costs:** Measure the reduction in training costs due to shorter training cycles for advanced employees.
2. **Employee Satisfaction:** Collect feedback from employees to assess the effectiveness of personalized training.
3. **Efficiency of Assessment and Batching:** Evaluate how quickly baseline assessments are conducted and how accurately batches are formed based on performance.
4. **Completion Rate:** Track the percentage of employees who successfully complete training after batch formation.
5. **Automation Efficiency:** Measure the time saved by automating the assessment, evaluation processes.

ER DIAGRAM



UML DIAGRAM



WIREFRAMES

Submit New Training Requirement Submission Form

Submit New Training Requirement

Training Type:

Duration:

Target Audience:

Additional Notes

Submit Request

Cancel

Training Administrator – Main Dashboard

L&D Admin Dashboard ♥ View All

Recent Activity

• Manager submitted a Training Type >

• Employee completed a Training Tile >

• Batch assigned to Training Trainer

Create New Batch (Potentially Manual)

Training Training Dashboard

(b) Employee-Training Dashboard

Your Assigned Training Assign

Status Assen	Status	Status >
In Progress ~	In Progress	In Progress
AnProgress	In Startad	Aviow Det

(c) Training Administrator – Main Dashboard

Filter/Search Batches

Batch ID	Training	# Employees	Trainer	Actions
Batch001	Type A	15	Anme	<div>Assign/Change Ti</div>
Batch002	Type B	10	—	<div>Assign Trainer</div>

Create New Batch (Potentially Manual)

(e) Trainer-Training Schedule

Batch ID	Training	Date/Time	Status	Actions
Batch001	Type A	2025-05-01	Upcoming	<div>View Roster</div>
Batch003	Type C	2025-05-03	Upcoming	<div>Provide Feedback</div>

USECASE DIAGRAM

