The Learning Management Service has the following modules:

1. Course
2. Curriculum
3. Content
4. Assessment
5. Assignment
6. Quiz
7. Media
8. Progress Tracking
9. Learning Path

Let me break down the essential APIs needed for each module:

1. Course Module APIs:

Code

POST /api/courses # Create a new course

GET /api/courses # List all courses with pagination & filters

GET /api/courses/{courseId} # Get course details

PUT /api/courses/{courseId} # Update course details

DELETE /api/courses/{courseId} # Archive/Delete a course

POST /api/courses/{courseId}/enroll # Enroll students in a course

GET /api/courses/featured # Get featured courses

GET /api/courses/recommended # Get personalized course recommendations

GET /api/courses/categories # Get course categories

GET /api/courses/search # Search courses with filters

1. Curriculum Module APIs:

Code

POST /api/curriculum # Create curriculum structure

GET /api/curriculum/{courseId} # Get curriculum for a course

PUT /api/curriculum/{curriculumId} # Update curriculum structure

POST /api/curriculum/{curriculumId}/sections # Add curriculum sections

PUT /api/curriculum/sections/{sectionId} # Update section details

DELETE /api/curriculum/sections/{sectionId} # Remove section

PUT /api/curriculum/reorder # Reorder curriculum sections

1. Content Module APIs:

Code

POST /api/content # Create content (text, video, etc.)

GET /api/content/{contentId} # Get content details

PUT /api/content/{contentId} # Update content

DELETE /api/content/{contentId} # Delete content

POST /api/content/bulk # Bulk content upload

GET /api/content/types # Get available content types

POST /api/content/{contentId}/review # Submit content for review

PUT /api/content/{contentId}/publish # Publish/unpublish content

1. Assessment Module APIs:

Code

POST /api/assessments # Create assessment

GET /api/assessments/{courseId} # List assessments for a course

GET /api/assessments/{assessmentId} # Get assessment details

PUT /api/assessments/{assessmentId} # Update assessment

DELETE /api/assessments/{assessmentId} # Delete assessment

POST /api/assessments/{assessmentId}/start # Start assessment

POST /api/assessments/{assessmentId}/submit # Submit assessment

GET /api/assessments/{assessmentId}/results # Get assessment results

1. Assignment Module APIs:

Code

POST /api/assignments # Create assignment

GET /api/assignments/{courseId} # List course assignments

GET /api/assignments/{assignmentId} # Get assignment details

PUT /api/assignments/{assignmentId} # Update assignment

DELETE /api/assignments/{assignmentId} # Delete assignment

POST /api/assignments/{assignmentId}/submit # Submit assignment

GET /api/assignments/submissions # Get assignment submissions

PUT /api/assignments/grade/{submissionId} # Grade assignment submission

1. Quiz Module APIs:

Code

POST /api/quizzes # Create quiz

GET /api/quizzes/{courseId} # List course quizzes

GET /api/quizzes/{quizId} # Get quiz details

PUT /api/quizzes/{quizId} # Update quiz

DELETE /api/quizzes/{quizId} # Delete quiz

POST /api/quizzes/{quizId}/attempt # Start quiz attempt

POST /api/quizzes/{quizId}/submit # Submit quiz

GET /api/quizzes/{quizId}/results # Get quiz results

1. Media Module APIs:

Code

POST /api/media/upload # Upload media file

GET /api/media/{mediaId} # Get media details

DELETE /api/media/{mediaId} # Delete media

POST /api/media/bulk-upload # Bulk media upload

GET /api/media/types # Get supported media types

PUT /api/media/{mediaId}/metadata # Update media metadata

GET /api/media/storage-stats # Get media storage statistics

1. Progress Tracking Module APIs:

Code

GET /api/progress/{userId}/courses # Get user's course progress

GET /api/progress/{courseId}/statistics # Get course completion statistics

POST /api/progress/mark-complete # Mark item as complete

GET /api/progress/{userId}/learning-path # Get learning path progress

GET /api/progress/analytics # Get detailed progress analytics

POST /api/progress/sync # Sync progress data

1. Learning Path Module APIs:

Code

POST /api/learning-paths # Create learning path

GET /api/learning-paths # List all learning paths

GET /api/learning-paths/{pathId} # Get learning path details

PUT /api/learning-paths/{pathId} # Update learning path

DELETE /api/learning-paths/{pathId} # Delete learning path

POST /api/learning-paths/{pathId}/enroll # Enroll in learning path

GET /api/learning-paths/recommended # Get recommended paths

PUT /api/learning-paths/{pathId}/sequence # Update path sequence

Common Features across all modules:

* Pagination support
* Search and filtering
* Sorting options
* Field selection
* Error handling
* Validation
* Rate limiting
* Caching strategies
* Audit logging
* Version control

Authentication & Authorization:

* All APIs should integrate with the Identity Management Service
* Role-based access control (RBAC)
* API key authentication for service-to-service communication
* JWT token validation