# Tổng hợp Iteration, Actor và Use Case - Dự án AuroraLang

## I. Phân chia công việc theo Iteration

### Iteration 1

Mục tiêu: Xây dựng nền tảng hệ thống và các tính năng cốt lõi.

Các công việc chính:

* - Phân tích yêu cầu & hoàn thiện thiết kế CSDL MySQL.
* - Xây dựng module Authentication & Authorization (Đăng ký, Đăng nhập, Reset password, Role-based access).
* - Xây dựng màn hình chính và trang người dùng bằng Thymeleaf.
* - Xây dựng CRUD cho Courses (Tạo, Xem, Cập nhật, Xóa khóa học).
* - Tạo cơ chế Enroll Course (Student đăng ký học).
* - Thiết kế phần quản trị (Admin Dashboard cơ bản).
* - Kiểm thử chức năng cơ bản và tích hợp FE-BE.

### Iteration 2

Mục tiêu: Phát triển chức năng học tập, flashcard, bài thi và quản lý lớp học.

Các công việc chính:

* - Xây dựng module Lesson (bài học): CRUD bài học, hiển thị nội dung, bình luận.
* - Xây dựng module Flashcard (học từ vựng, Reflex Review).
* - Phát triển module Test: câu hỏi, đề thi, bài làm và chấm điểm.
* - Tích hợp tiến độ học tập (Lesson progress, Study streaks).
* - Thêm module Class Management (Lớp học, Buổi học, Điểm danh).
* - Bổ sung chức năng Import file (Import questions, Import student list).
* - Hoàn thiện Admin Dashboard, giao diện thống kê.
* - Kiểm thử hệ thống tổng thể và tối ưu hiệu năng.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Home Page | Guest | Medium | Iter1 | Coded |
| Account Register | Guest | Simple | Iter1 | Coded |
| System Login | User | Simple | Iter1 | Coded |
| Blank Dashboard | Admin | Simple | Iter1 | Coded |
| Setting List | Admin | Simple | Iter1 | Pending |
| Setting Details | Admin | Medium | Iter1 | Pending |
| Account List | Admin | Medium | Iter1 | Coded |
| New Account | Admin | Simple | Iter1 | Coded |
| Account Details | Admin | Simple | Iter1 | Coded |
| Course List | Manager, Expert |  | Iter1 | Coded |
| New Course | Admin |  | Iter1 | Coded |
| Course Details | Manager, Expert |  | Iter1 | Coded |
| Course Setting List | Expert |  | Iter1 | Pending |
| Course Setting Details | Expert |  | Iter1 | Pending |
| Complex |  |  |  |  |
| Class List | Teacher |  | Iter2 |  |
| New Class | Manager |  | Iter2 |  |
| Class Details | Teacher |  | Iter2 |  |
| Student List | Manager | Simple | Iter2 | Pending |
| New Student | Manager | Simple | Iter2 | Pending |
| Student Details | Manager | Simple | Iter2 | Pending |
| Public Courses | Guest |  | Iter2 | Pending |
| Public Course Details | Guest |  | Iter2 | Pending |
| Course/Class Enroll | Guest |  | Iter2 | Pending |
| Online Payment | Guest |  | Iter2 | Pending |
| Flashcard List | Teacher | Medium | Iter2 | Pending |
| Flashcard Library | Student |  | Iter2 | Pending |
| Flashcard Details | Student |  | Iter2 | Pending |
| Student Dashboard | Student |  | Iter2 | Pending |
| Flashcard Lesson | Student |  | Iter2 | Pending |
| Flashcard Keyword | Student |  | Iter2 | Pending |

## II. Danh sách Actor và vai trò

### Actors

|  |  |  |
| --- | --- | --- |
| **#** | **Actor** | **Description** |
| 1 | Administrator | Responsible for managing user accounts and access control. Admin ensures users are properly registered, assigned correct roles, and follow platform policies. |
| 2 | Manager | Responsible for supervising lecturers, classes, and learner performance. This role ensures teaching quality, monitors learning progress, and provides reports to support organizational goals. Unlike Admin, the Manager does not handle system-level or user account control. |
| 3 | Teacher | Responsible for creating and delivering learning content to learners. This role directly interacts with students, provides lessons, assignments, and assessments, and monitors learner progress at the class level. |
| 4 | Student | The end-user of the system, responsible for participating in learning activities, completing assignments, and tracking their own progress. Students mainly consume the learning content provided by lecturers and interact with the system to improve their knowledge and skills. |
| 5 | Guest | A non-registered or non-logged-in user who can only access limited parts of the system. Guests can explore basic features or view sample content but must register as a Student to gain full access. |
| 6 | Expert | Creates and maintains course content (modules, lessons, flashcards, questions/tests) and manages draft/publish. Doesn’t manage users or system settings. |

## III. Danh sách Use Cases chính

### Screen Authorization

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Screen** | **Guest** | **User** | **Expert** | **Student** | **Teacher** | **Manager** | **Admin** |
| Login |  | X | X | X | X | X | X |
| Register | X | X |  |  |  |  |  |
| ForgotPassword |  | X | X | X | X | X | X |
| Change Password |  | X | X | X | X | X | X |
| Home page | X | X | X | X | X | X |  |
| User Profile |  | X | X | X | X | X | X |
| Public Courses | X | X |  | X |  |  |  |
| Public Course Details | X | X |  | X |  |  |  |
| Public Classes | X | X |  | X |  |  |  |
| Public Class Details | X | X |  | X |  |  |  |
| Course/Class Enroll |  |  |  | X |  |  |  |
| Online Payment |  |  |  | X |  |  |  |
| Flashcard Library |  |  |  | X |  |  |  |
| Flashcard Details |  |  |  | X |  |  |  |
| Student Dashboard |  |  |  | X |  |  |  |
| Class Schedule |  |  |  | X |  |  |  |
| Class Session Details |  |  |  | X |  |  |  |
| Class/Course Lesson |  |  |  | X |  |  |  |
| Test Taking |  |  |  | X |  |  |  |
| Test Results |  |  |  | X |  |  |  |
| Test Answers |  |  |  | X |  |  |  |
| Flashcard Lesson |  |  |  | X |  |  |  |
| Flashcard Keyword |  |  |  | X |  |  |  |
| Matching View |  |  |  | X |  |  |  |
| Keyword Review |  |  |  | X |  |  |  |
| Reflex Review |  |  |  | X |  |  |  |
| Course List |  |  | X |  |  |  |  |
| Course Details |  |  | X |  |  |  |  |
| Course Setting List |  |  | X |  |  |  |  |
| Course Setting Details |  |  | X |  |  |  |  |
| Lesson List |  |  | X |  |  |  |  |
| Lesson Details |  |  | X |  |  |  |  |
| Flashcard List |  |  | X |  |  |  |  |
| Flashcard Details |  |  | X |  |  |  |  |
| Question List |  |  | X |  |  |  |  |
| Questions Import |  |  | X |  |  |  |  |
| Question Details |  |  | X |  |  |  |  |
| Test List |  |  | X |  |  |  |  |
| New Test |  |  | X |  |  |  |  |
| Test Details |  |  | X |  |  |  |  |
| Class List |  |  |  |  | X |  |  |
| Class Details |  |  |  |  | X |  |  |
| Lesson List |  |  |  |  | X |  |  |
| Lesson Details |  |  |  |  | X |  |  |
| Flashcard List |  |  |  |  | X |  |  |
| Flashcard Details |  |  |  |  | X |  |  |
| Test List |  |  |  |  | X |  |  |
| New Test |  |  |  |  | X |  |  |
| Test Details |  |  |  |  | X |  |  |
| Class List |  |  |  |  |  | X |  |
| New Class |  |  |  |  |  | X |  |
| Class Details |  |  |  |  |  | X |  |
| Session List |  |  |  |  |  | X |  |
| New Session |  |  |  |  |  | X |  |
| Session Details |  |  |  |  |  | X |  |
| Student List |  |  |  |  |  | X |  |
| New Student |  |  |  |  |  | X |  |
| Students Import |  |  |  |  |  | X |  |
| Student Details |  |  |  |  |  | X |  |
| Course List |  |  |  |  |  | X |  |
| Course Details |  |  |  |  |  | X |  |
| Student List |  |  |  |  |  | X |  |
| New Student |  |  |  |  |  | X |  |
| Students Import |  |  |  |  |  | X |  |
| Student Details |  |  |  |  |  | X |  |
| Admin Dashboard |  |  |  |  |  |  | X |
| Setting List |  |  |  |  |  |  | X |
| Setting Details |  |  |  |  |  |  | X |
| Account List |  |  |  |  |  |  | X |
| New Account |  |  |  |  |  |  | X |
| Account Details |  |  |  |  |  |  | X |
| Course List |  |  |  |  |  |  | X |
| New Course |  |  |  |  |  |  | X |
| Course Details |  |  |  |  |  |  | X |

### Use Cases (UC)

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Use Case** | **Feature** | **Use Case Description** |
| 01 | View Home Page | Content Browsing | Allows guests to access the main page to navigate core features quickly. |
| 02 | Register User | User Management | Allows users to register a new account in the system. |
| 03 | Login System | User Management | Allows users to log into the system using credentials. |
| 04 | Reset Password | User Management | Helps users recover or reset a forgotten password |
| 05 | View/Update User Profile | User Management | Allows users to edit and update existing profile information. |
| 06 | Change Password | User Management | Supports users to perform the 'Change Password' action on passwords. |
| 07 | View Public Courses | Course Browsing | Supports students to perform the 'View Public Courses' action on views.. |
| 08 | View Public Course Details | Course Browsing | Allows users to view detailed information for a selected course. |
| 09 | View Public Classes | Class Browsing | Supports users to perform the 'View Public Classes' action on views. |
| 10 | View Public Class Details | Class Browsing | Allows users to view detailed information for a selected class. |
| 11 | Enroll Course/Class | Enrollment | Allows users to enroll in a course and manage enrollment status. |
| 12 | Make Online Payment | General | Supports users to perform the 'Make Online Payment' action on makes. |
| 13 | View My Flashcards | Flashcard Browsing | Supports users to perform the 'View My Flashcards' action on views. |
| 14 | Add New Flashcard | Flashcard Management | Allows users to create a new flashcard with required information and settings. |
| 15 | Update Flashcard Details | Flashcard Management | Allows users to edit and update existing flashcard information. |
| 16 | View My Courses | Course Browsing | Supports users to perform the 'View My Courses' action on views. |
| 17 | View My Classes | Class Browsing | Supports users to perform the 'View My Classes' action on views. |
| 18 | View Class Schedule | Class Browsing | Supports users to perform the 'View Class Schedule' action on classes. |
| 19 | View Class Session Details | Class Browsing | Allows users to view detailed information for a selected class. |
| 20 | View Class/Course Lesson List | Course Browsing | Allows users to view a list of courses. |
| 21 | View Class/Course Lesson Details | Course Browsing | Allows users to view detailed information for a selected course. |
| 22 | Comment Class/Course Lesson | General | Supports users to perform the 'Comment Class/Course Lesson' action on courses. |
| 23 | Take Test Lesson | General | Supports users to perform the 'Take Test Lesson' action on lessons. |
| 24 | View Test Results | Assessment Browsing | Supports users to perform the 'View Test Results' action on tests. |
| 25 | View Test Answers | Assessment Browsing | Supports users to perform the 'View Test Answers' action on tests. |
| 26 | View Flashcard Lesson | Lesson Browsing | Supports users to perform the 'View Flashcard Lesson' action on lessons. |
| 27 | View Flashcard Keyword | Flashcard Browsing | Displays keyword matching analytics for users to review. |
| 28 | View Keyword Matching | Content Browsing | Displays keyword matching analytics for users to review. |
| 29 | Review New Keywords | Content Browsing | Allows users to create a new review with required information and settings. |
| 30 | Take Reflex Review | Content Browsing | Supports users to perform the 'Take Reflex Review' action on takes. |
| 31 | View Expert Course List | Course Browsing | Allows experts to view a list of courses. |
| 32 | View Course Details | Course Browsing | Allows users to view detailed information for a selected course. |
| 33 | View Course Settings | Course Browsing | Supports users to perform the 'View Course Settings' action on courses. |
| 34 | Add New Course Setting | Course Management | Allows users to create a new setting with required information and settings. |
| 35 | Update Course Setting Details | Course Management | Allows users to edit and update existing setting information. |
| 36 | View Course Lesson List | Course Browsing | Allows users to view a list of courses. |
| 37 | Delete Course Lesson | Course Management | Allows users to delete an existing course after confirmation. |
| 38 | Add New Course Lesson | Course Management | Allows users to create a new course with required information and settings. |
| 39 | Update Course Lesson Details | Course Management | Allows users to edit and update existing course information. |
| 40 | View Course Flashcard List | Course Browsing | Allows users to view a list of courses. |
| 41 | Delete Course Flashcard | Course Management | Allows users to delete an existing course after confirmation. |
| 42 | Add New Course Flashcard | Course Management | Allows users to create a new course with required information and settings. |
| 43 | Update Course Flashcard Details | Course Management | Allows users to edit and update existing course information. |
| 44 | View Question List | Content Browsing | Allows users to view a list of questions. |
| 45 | Import Questions | General | Supports users to perform the 'Import Questions' action on imports. |
| 46 | Add New Question | Content Management | Allows users to create a new question with required information and settings. |
| 47 | Update Question Details | Content Management | Allows users to edit and update existing question information. |
| 48 | View Course Test List | Course Browsing | Allows users to view a list of courses. |
| 49 | Add New Course Test | Course Management | Allows users to create a new course with required information and settings. |
| 50 | Update Course Test Details | Course Management | Allows users to edit and update existing course information. |
| 51 | View Teacher Classes | Class Browsing | Supports teachers to perform the 'View Teacher Classes' action on teachers. |
| 52 | View Class Details | Class Browsing | Allows users to view detailed information for a selected class. |
| 53 | View Class Lesson List | Class Browsing | Allows users to view a list of classes. |
| 54 | Delete Class Lesson | Class Management | Allows users to delete an existing class after confirmation. |
| 55 | Add New Class Lesson | Class Management | Allows users to create a new class with required information and settings. |
| 56 | Update Class Lesson Details | Class Management | Allows users to edit and update existing class information. |
| 57 | View Class Flashcard List | Class Browsing | Allows users to view a list of classes. |
| 58 | Delete Class Flashcard | Class Management | Allows users to delete an existing class after confirmation. |
| 59 | Add New Class Flashcard | Class Management | Allows users to create a new class with required information and settings. |
| 60 | Update Class Flashcard Details | Class Management | Allows users to edit and update existing class information. |
| 61 | View Class Test List | Class Browsing | Allows users to view a list of classes. |
| 62 | Add New Class Test | Class Management | Allows users to create a new class with required information and settings. |
| 63 | Update Class Test Details | Class Management | Allows users to edit and update existing class information. |
| 64 | View Class List | Class Browsing | Allows managers to view a list of classes. |
| 65 | Add New Class | Class Management | Allows users to create a new class with required information and settings. |
| 66 | Update Class Details | Class Management | Allows users to edit and update existing class information. |
| 67 | View Class Sessions | Class Browsing | Supports users to perform the 'View Class Sessions' action on classes. |
| 68 | Add New Session | Content Management | Allows users to create a new ad with required information and settings. |
| 69 | Update Session Details | Content Management | Allows users to edit and update existing update information. |
| 70 | Update Session Attendance | Content Management | Allows users to edit and update existing update information. |
| 71 | View Class Students | Class Browsing | Supports users to perform the 'View Class Students' action on classes. |
| 72 | Add New Class Student | Class Management | Allows users to create a new class with required information and settings. |
| 73 | Import Class Students | General | Supports users to perform the 'Import Class Students' action on classes. |
| 74 | Update Class Student Details | Class Management | Allows users to edit and update existing class information. |
| 75 | View Manager Course List | Course Browsing | Allows users to view a list of courses. |
| 76 | View Manager Course Details | Course Browsing | Allows users to view detailed information for a selected course. |
| 77 | View Course Students | Course Browsing | Supports users to perform the 'View Course Students' action on courses. |
| 78 | New Course Student | Course Management | Allows users to create a new course with required information and settings. |
| 79 | Import Course Students | General | Supports users to perform the 'Import Course Students' action on courses. |
| 80 | Update Course Student Details | Course Management | Allows users to edit and update existing course information. |
| 81 | View Admin Dashboard | Content Browsing | Allows admins to access the main page to navigate core features quickly. |
| 82 | View Setting List | Content Browsing | Allows users to view a list of settings. |
| 83 | Activate/Deactivate Setting | Moderation & Controls | Allows users to activate or deactivate a setting to control visibility or availability. |
| 84 | Add New Setting | Content Management | Allows users to create a new setting with required information and settings. |
| 85 | Update Setting Details | Content Management | Allows users to edit and update existing setting information. |
| 86 | View Account List | Content Browsing | Allows users to view a list of accounts. |
| 87 | Activate/Deactivate Account | Moderation & Controls | Allows users to activate or deactivate an account to control visibility or availability. |
| 88 | Add New Account | Account Management | Allows users to create a new account with required information and settings. |
| 89 | Update Account Details | Content Management | Allows users to edit and update existing account information. |
| 90 | View Course List | Course Browsing | Allows users to view a list of courses. |
| 91 | Delete Course | Course Management | Allows users to delete an existing course after confirmation. |
| 92 | Activate/Deactivate Course | Moderation & Controls | Allows users to activate or deactivate a course to control visibility or availability. |
| 93 | Add New Course | Course Management | Allows users to create a new course with required information and settings. |
| 94 | Update Course Details | Course Management | Allows users to edit and update existing course information. |