**Detailed Software Technical Design (DSTD)**

**For**

**V-ACADEMY**

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**Document Revisions**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** | **Reviewer** | **Approver** |
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# 

# Introduction

## Purpose

This document provides the detailed technical design for the V-ACADEMY system, which helps the developer to know about the project.

## Scope

This will mainly be used by the students who opt for distance education programs offered by institutes, and the institutes also create their own platform for students to get the academic facilities from any computer connected to the Internet. This website is designed in a way that it can be easily extended to provide more features and will be easily customizable so that it can work according to user’s potential.

## Definitions, Acronyms and Abbreviations

V-ACADEMY (VA): This is the upcoming e-learning platform which is developed for the online learners. Currently this platform possesses the following provisions.

- Used for learning the syllabus.

- Interaction forum between student and mentor.

- Participate in Mock test.

## References

[https://www.google.com/url?q=https://www.admecindia.co.in/online-training-graphic-web-animation.html&sa=D&source=hangouts&ust=1582279906019000&usg=AFQjCNGUfNdzVIr7s45747CoF76eBQ9m4g.](https://www.google.com/url?q=https://www.admecindia.co.in/online-training-graphic-web-animation.html&sa=D&source=hangouts&ust=1582279906019000&usg=AFQjCNGUfNdzVIr7s45747CoF76eBQ9m4g.%20%0c)

# *Assumptions*

- Can load in slow internet connection using Basic HTML version.

- Fast and reliable website.

- User friendly atmosphere in and out of the website.

# *Project Overview and Usecase Diagrams*

The system will be having 3 roles - User, Mentor and Admin.

There will be a set of permissions associated with each role.

***Mentor:***

This role enables the user to offer courses, upload lectures, set exams for courses he is offering.

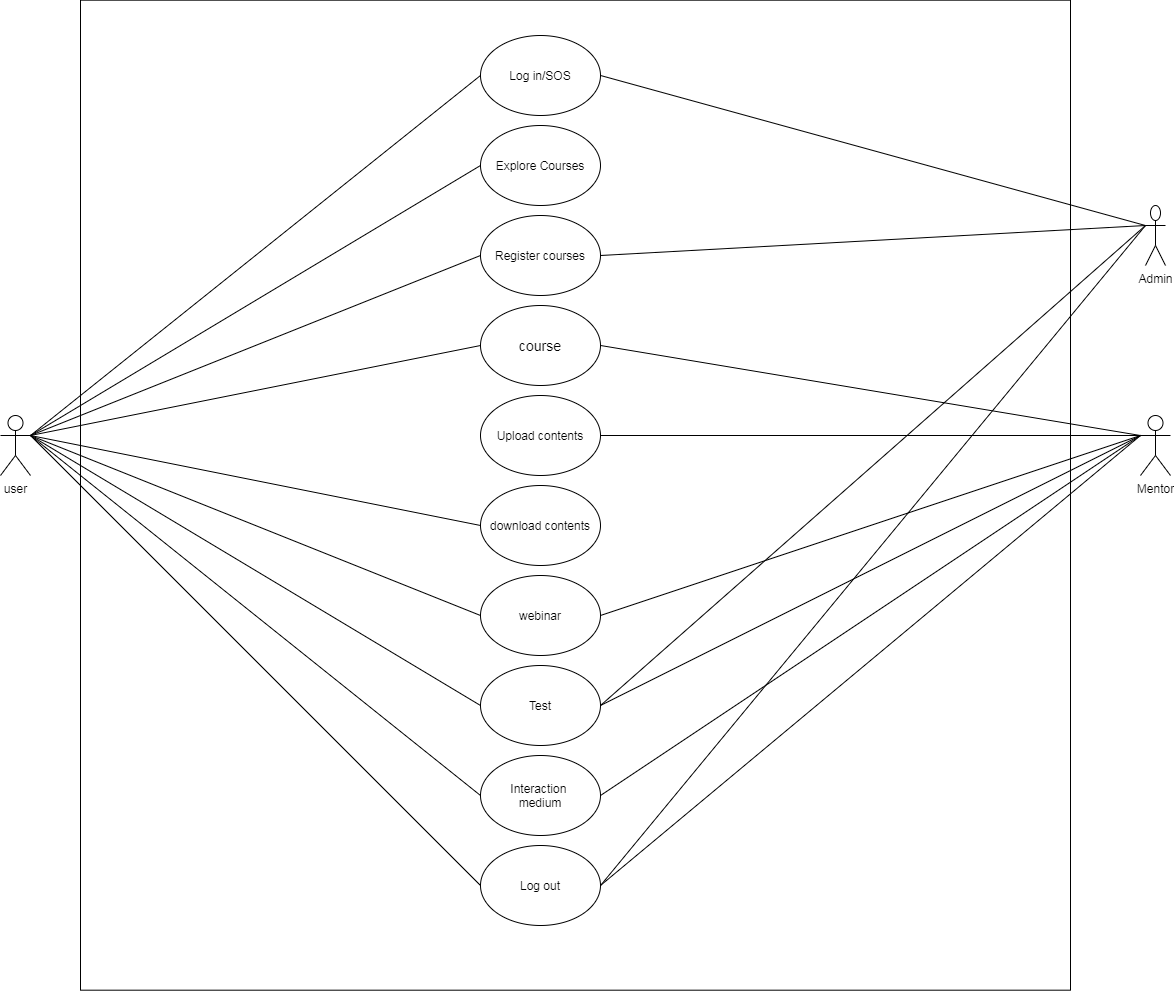
***User:***

This role enables the user to register for courses, answer tests, and view lectures.

***Admin:***

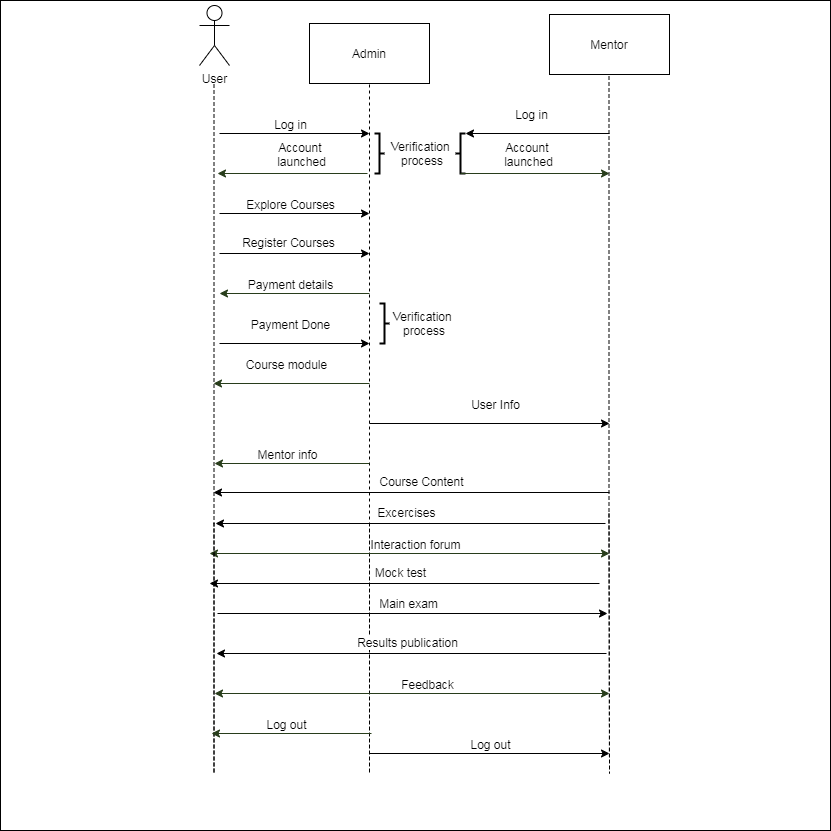
This role enables the user to manage users (create, edit and delete) besides performing other administrative tasks such as monitoring the system operation, editing system configuration etc.

***Use case diagram:***



# Detailed Design for VA:

This section describes the detailed design for the VA ***module***.



## Detailed Design for Feature: <<Feature Name>>

*[This section describes the detailed design for the feature including the user interface design.]*

### **User Profile**

*[Describe the different user types with the security profiles and specify the roles that can access these screens.]*

### **Navigation Map**

*[Describe the navigation map along with use case traceability of all screens for this feature.]*

### **UI Screen Design**

|  |  |
| --- | --- |
| **Page Summary** | |
| **Name** | Search for Customer File |
| **Description** | The user retrieves the customer information based on the search criteria such as File ID, last name, first name, middle name, business name, SSN/TIN, address, city, state and/or zip. |
| **Use Case Number** | UC-002 |

#### *Screen Layout*

*[Include a screen shot and describe each element/button in the following table.]*

#### *Validations*

|  |  |  |
| --- | --- | --- |
| **Error Trigger** | **Action** | **Description** |
| If the user group is not selected. | Displays the message “Please select a User Group from the list”. | Prompts the user to select an entry from the User Group list. |
| User enters an invalid date | Displays the message “Enter a valid date. The date must be in <mm-dd-yyyy> format”. | Displays invalid date message. |

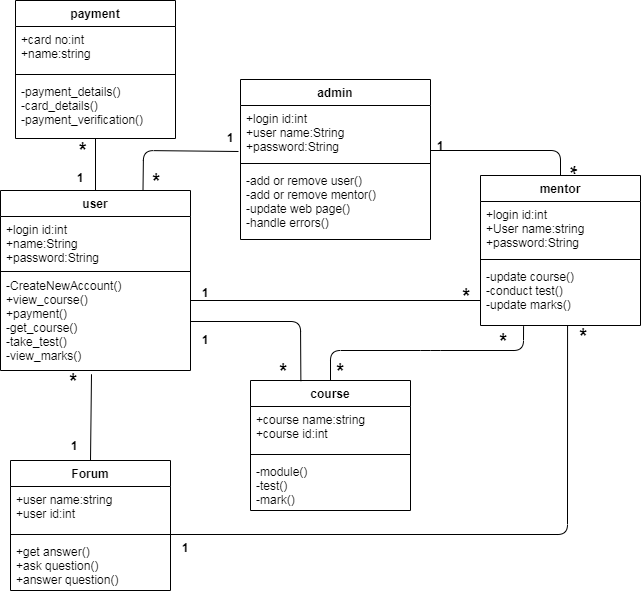
### **Object Model/Data Flow Design**

*[This sub-section describes the detailed design for the system pertaining to the <<Feature Name>>**feature****.*** *Interaction diagrams showing the details of the component structure, behavior, or information/control flow may be included in the sub-section devoted to that particular component.]*

#### *Interface Description*

*[Describe the interfaces including component interfaces and interfaces to other systems, products, or networks.]*

#### *Class Design*



##### Algorithmic/Business Logic Description (Optional)

*[Describe complex algorithms used in the class (if any).]*

##### Local Data Structure (Optional)

*[Describe key data structure algorithms used (if any).]*

#### *Data Transfer/Value objects*

*[Based on the design pattern being used, identify and describe the value/transfer objects.]*

#### *Related Database Tables*

*[Give the list of related database tables.]*

#### *Dependencies with Other Sub-systems/Components*

*[Describe the dependencies with other sub-system/components, if any.]*

## Detailed Design for Feature: <<Feature Name>>

*Repeat all sub-sections given in 3.1 for this feature.*

# Detailed Design for Module: <<Module Name>>

*[Detailed design for Module 2.]*

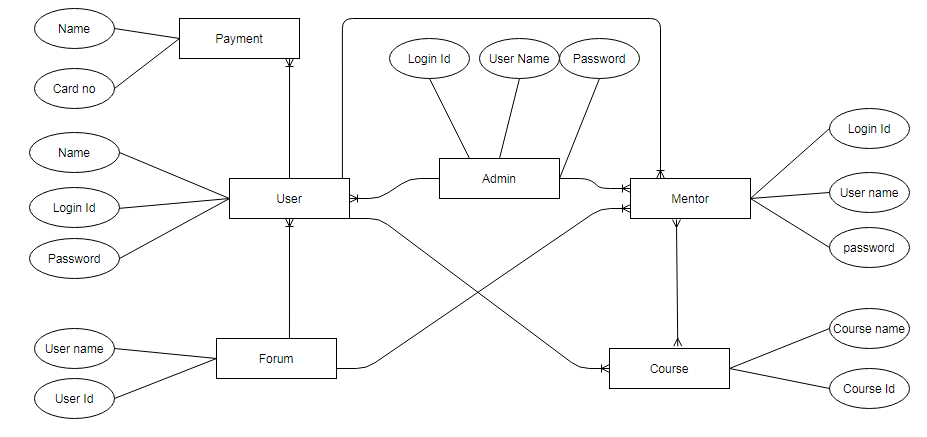
*Repeat all sub-sections given in section 3 for this module.*

# Database Design

*[This section describes the persistent data and metadata used and generated by the module/sub-system. This will include database schemas (if the database schema is large, use a separate document for database design), registry structures, property file structures, etc.*

|  |  |
| --- | --- |
| **Models** | **Tools** |
| Database Entity Relationship Diagrams | ERWin |
| Object Models | Rational Rose |

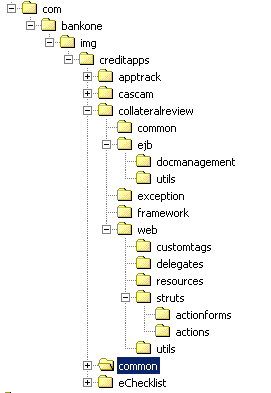
## Entity Relationship Diagrams



# Packaging/Folder Structure and System Artifacts

*[This section describes the file structure for the <Project Name> project, which will indicate where the code, unit tests, executables, libraries, etc. are to be placed during implementation. Optionally the file structure can be described in a separate GA chapter and a reference given here.]*

**[Sample structure**

**

**End Sample Structure]**

## System Artifacts

*[Provide information on the Registry structure, INI files, property files, configuration files, etc.]*

# Core Technical Services Design

*[This section describes the detailed design and usage pattern for the core technical services of the system.]*

## Persistence

*[This sub-section captures the detailed design and usage patterns of the persistence service for the application.]*

## Inter-process Communication

*[This sub-section captures the detailed design and usage patterns of the inter-process communication framework for the application.]*

## Authentication and Authorization

*[This sub-section captures the detailed design and usage patterns of the security services for the application.]*

## Error Handling

*This sub-section captures the detailed design and usage patterns of the error handling services for the application.]*

## Logging

*[This sub-section captures the detailed design and usage patterns of the logging framework for the application.]*

## Transaction Management

*[This sub-section captures the detailed design and usage patterns of the Transaction Management service for the application.]*

## Other Applicable Technical Services

*[This sub-section captures the detailed design and usage patterns of the other core technical services to be handled by the system such as* *the* *installation mechanism, failure prevention, fault tolerance, caching design, internationalization, validation framework, client and server initialization, error handling, etc.]*

# 9 Non Functional Requirements

# Appendix

*[Presents information that supplements the design specification.]*

## Design Metrics to be Used

*[A description of all design metrics to be used during the design activity is listed here.]*

## Supplementary Information

*[Provide as required.]*

## DQI – Design Quality Index Checklist

This checklist shall be used to perform self-review as a reference while preparing software design.

**