**Detailed Software Technical Design (DSTD)**

**For**

***V-ACADEMY***

**TABLE OF CONTENTS**

[**1**](#_28h4qwu) **INTRODUCTION 5**

[1.1](#_nmf14n) Purpose 5

[1.2](#_37m2jsg) Scope 5

[1.3](#_1mrcu09) Definitions, Acronyms and Abbreviations 5

[1.4](#_46r0co2) References 5

[**2**](#_2lwamvv) **ASSUMPTIONS 6**

[**3**](#_3dy6vkm) **PROJECT OVERVIEW AND USECASE DIAGRAMS 6**

[**4**](#_4d34og8) **DETAILED DESIGN FOR MODULE: <<MODULE NAME>> 7**

[4.1](#_2s8eyo1) Detailed Design for Feature: <<Feature Name>> 7

[***4.1.1***](#_17dp8vu) ***User Profile*** *7*

[***4.1.2***](#_3rdcrjn) ***Navigation Map*** *7*

[***4.1.3***](#_26in1rg) ***UI Screen Design*** *7*

[*4.1.3.1*](#_111kx3o) *Screen Layout* 7

[*4.1.3.2*](#_1ksv4uv) *Validations* 8

[***4.1.4***](#_44sinio) ***Object Model/Data Flow Design*** *8*

[*4.1.4.1*](#_3l18frh) *Interface Description* 8

[*4.1.4.2*](#_206ipza) *Class Design* 8

[4.1.4.2.1](#_4k668n3) Algorithmic/Business Logic Description (Optional) 8

[4.1.4.2.2](#_1y810tw) Local Data Structure (Optional) 8

[*4.1.4.3*](#_2zbgiuw) *Data Transfer/Value objects* 8

[*4.1.4.4*](#_1egqt2p) *Related Database Tables* 9

[*4.1.4.5*](#_1ci93xb) *Dependencies with Other Sub-systems/Components* 9

[4.2](#_3ygebqi) Detailed Design for Feature: <<Feature Name>> 9

[**5**](#_2dlolyb) **DETAILED DESIGN FOR MODULE: <<MODULE NAME>> 10**

[**6**](#_3as4poj) **DATABASE DESIGN 11**

[6.1](#_1pxezwc) Entity Relationship Diagrams 11

[**7**](#_sqyw64) **PACKAGING/FOLDER STRUCTURE AND SYSTEM ARTIFACTS 12**

[7.1](#_147n2zr) System Artifacts 12

[**8**](#_3o7alnk) **CORE TECHNICAL SERVICES DESIGN 13**

[8.1](#_3cqmetx) Persistence 13

[8.2](#_1rvwp1q) Inter-process Communication 13

[8.3](#_4bvk7pj) Authentication and Authorization 13

[8.4](#_2r0uhxc) Error Handling 13

[8.5](#_1664s55) Logging 13

[8.6](#_3q5sasy) Transaction Management 13

[8.7](#_25b2l0r) Other Applicable Technical Services 13

[**9**](#_kgcv8k) **NON FUNCTIONAL REQUIREMENTS 14**

[**APPENDIX 14**](#_4f1mdlm)

[1.](#_2u6wntf) Design Metrics to be Used 14

[2.](#_19c6y18) Supplementary Information 14

[3.](#_3tbugp1) DQI – Design Quality Index Checklist 14

**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.

## ***Scope***

The proposed V-Acadamey is simple to use for both students and Teachers. The proposed system includes the following.

**Web-based access:**

All users who have internet facility can access the system wherever and whenever they wish.

**Document management**:

System allows uploading and downloading of documents (pdf, word documents, and ppt)

## ***Definitions, Acronyms and Abbreviations***

**V-Academy (VA):** It is an upcoming e-learning service provider in the country for various school curriculums. Currently the systems possess the basic provisions to

* View the curriculum and respective course content
* Upload Course content in terms of videos
* Practice tests and mock tests

## ***References***

[https://www.admecindia.co.in/online-training-graphic-web-animation.html](https://www.google.com/url?q=https://www.admecindia.co.in/online-training-graphic-web-animation.html&sa=D&source=hangouts&ust=1582279493268000&usg=AFQjCNGdsrdqqODvvRA4bd-rwCy40GjLTg)

# **Assumptions**

* It will be user friendly environment.
* Easy accessible for all users through Internet.

- Learning materials are available.

- Students can also discuss with the teachers through Forum.

# **PROJECT OVERVIEW AND USECASE DIAGRAMS**

The primary actors of the system are Teachers, students and Admin.

i.**Teachers:**

a) Upload material

b) View learner’s progress

c) Answering student’s questions.

**ii.Students:**

a) View learning materials

b) View progress

c) Attend test

d) Interactive discussion

**iii.Admin:**

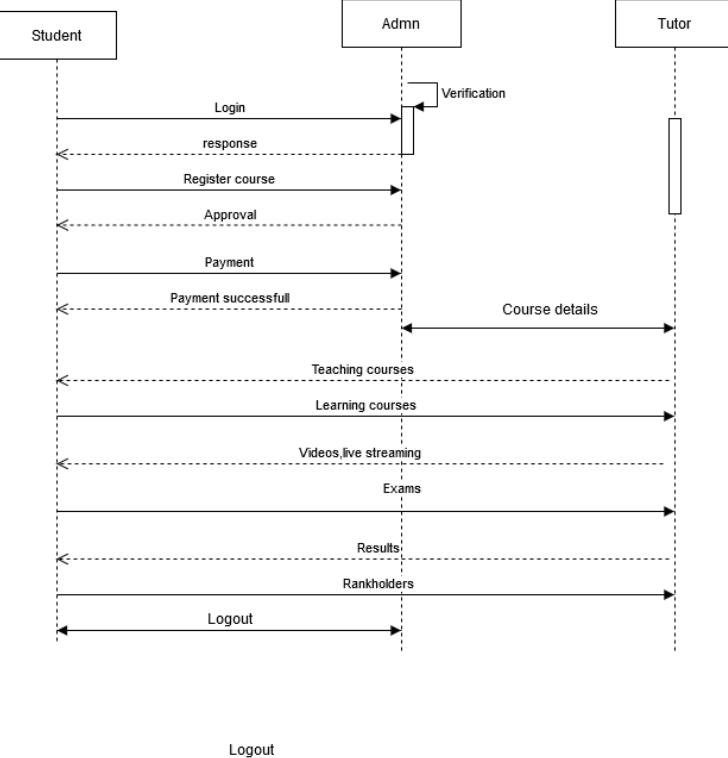
a) Manage students

b) Manage Teachers

# 

# **Detailed Design for VA:**

# **This system describes the detailed design for the VA module/sub-system.**



## ***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. |

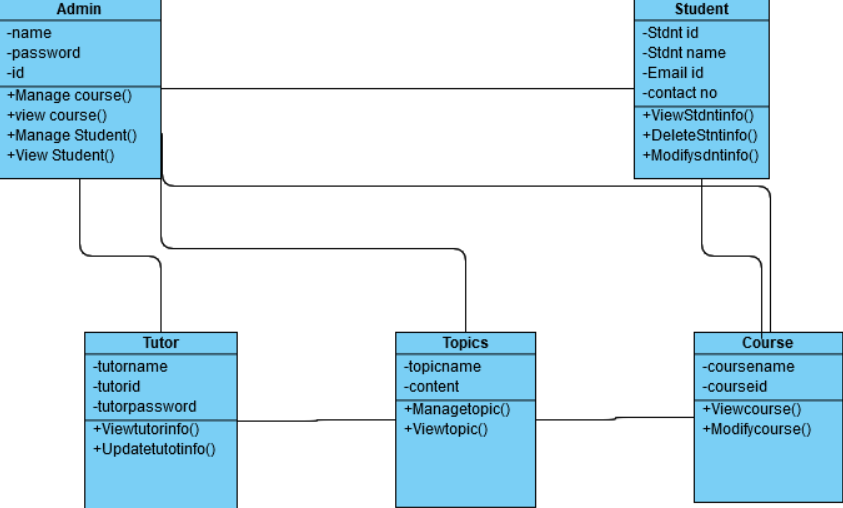
### **Object Model/Data Flow Design**

*[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.]*

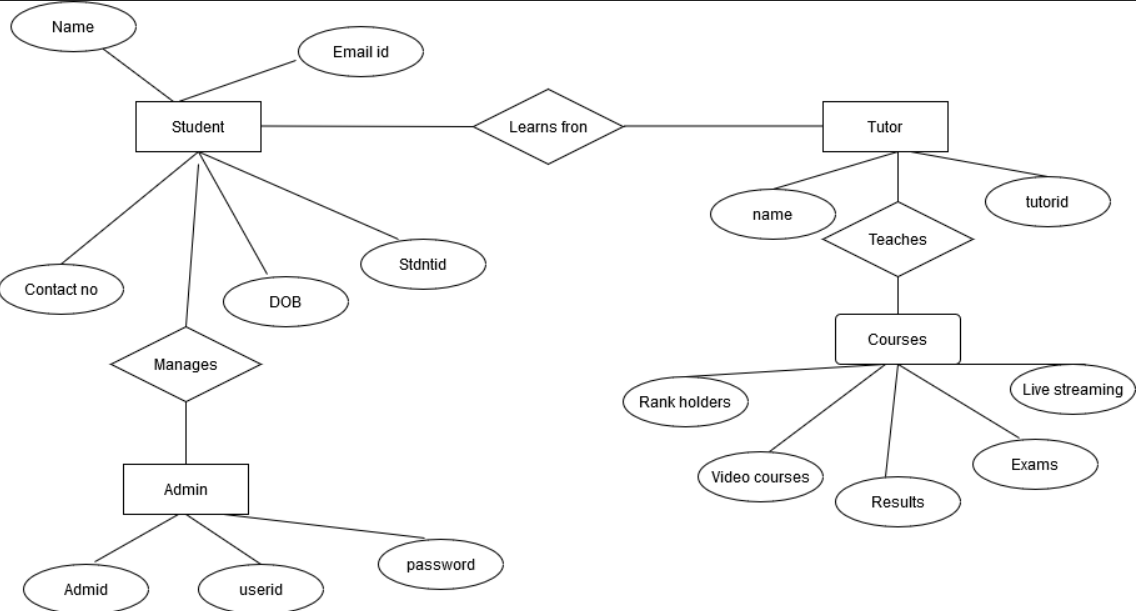
*Repeat all sub-sections given in section 3 for this module.*

# **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 |

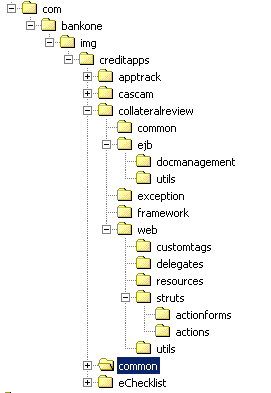
## ***Entity Relationship Diagrams***

**

# **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***

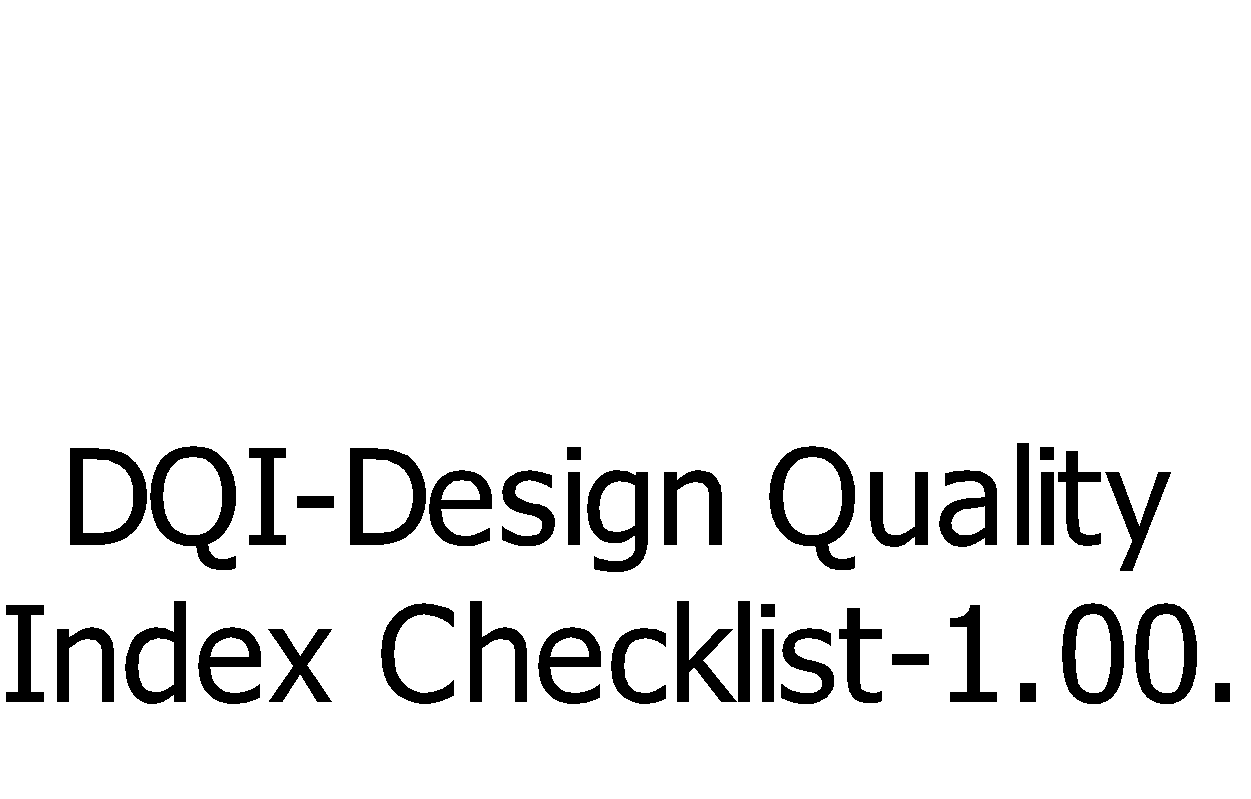
*[A description of all design metrics to be used during the design activity is listed here.]*

## ***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.

**