2DV608 Assignment 1

Software Design

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**canvas Learning Management System (LMS)**

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**Canvas:** The Canvas LMS is the world's fastest learning management system. Canvas is designed to make learning more accessible for everybody, including primary school students to teachers, professors, and business executives. We could say a lot about Canvas education environment, especially contains the user-friendly Canvas LMS, but space is limited.

# **Stakeholders OF canvas**

## **Internal stakeholders of Canvas**

Officers and directors: The people who are in charge of an activity, department, a school & college who use the canvas in the intuition.

Employees: The people who are working in intuition and working on the canvas.

## **External stakeholders of Amazon**

Students: A person who gets the data from canvas related to his\her studies also get information about the grades from there.

Teachers: The people who upload the data related to student studies and update the grades of the students.

# **functional Requirements**

## **Requirement** **1**

**Student /Teacher** **Login:** It’s very important the user to get access to the main functions of the system. They must be login with their unique credentials.the credentials created automatically by the system.

## **Requirement 2**

**Course data:** This functional requirement for Teachers. They upload the data on canvas related to the course which they teach in the specific section. The section created by the employee of the intuition.

## **Requirement 3**

**Marks check:** This functional requirement is student. Here he\she can check their marks of the specific subject. The teacher upload marks of the students because he\she teaches this specific subject, the instructor submits the students' grades.

# **Non-functional Requirements**

## **Non-functional Requirement 1**

**Valid name:** The name of the Student/Teacher should be always using alphabetical characters; it should not have any digits or punctuation and no longer than 30 characters.

## **Non-functional Requirement 1**

**Valid phone number:** The phone number should be between 6-14 numbers and no letters.

## **Non –functional Requirements3**

**User age:** Canvas recommends that you must be at least 14 years old becoming a member**.**

# Checklist for Requirements Analysis

|  |  |  |  |
| --- | --- | --- | --- |
| **Checklist for Requirements Analysis** | **Requirement 1** | **Requirement 2** | **Requirement 3** |
| Premature design | Yes | Yes | Yes |
| Combined requirements | No | No | No |
| Unnecessary requirements | No | No | No |
| Use of non-standard hardware | No | No | No |
| Conformance with business goals | Yes | Yes | Yes |
| Requirements ambiguity | No | No | No |
| Requirements realism | Yes | Yes | Yes |
| Requirements testability | Yes | Yes | Yes |

# **5 Requirements Classification**

# The Easiest way to classify requirements is to use what is called **a faceted approach**

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements Classification** | **Requirement 1** | **Requirement 2** | **Requirement 3** |
| System | Yes | Yes | Yes |
| User interface | Yes | Yes | Yes |
| Database | Yes | Yes | Yes |
| Communications | No | No | Yes |

# 6 Assess Requirements Risks

|  |  |  |  |
| --- | --- | --- | --- |
| **Assess Requirements Risks** | **Requirement 1** | **Requirement 2** | **Requirement 3** |
| Performance risks | High | Low | High |
| Safety and security risks | High | Low | High |
| Process risks | Low | Low | Low |
| Implementation technology risks | Low | Low | Low |
| Database risks | Medium | Medium | Medium |
| Schedule risks | Low | Low | Low |
| External risks | High | Medium | High |
| Stability risks | Medium | Medium | Medium |

# 7 Systematic Validation of Requirements

|  |  |
| --- | --- |
| Are the requirements complete? | Yes |
| Are the requirements consistent? | Yes |
| Are the requirements comprehensible? | Yes |
| Are the requirements ambiguous? | No |
| Are the requirements document structured? | Yes |
| Are the requirements traceable? | Yes |
| Does the requirements document as a whole, or individual standards? | Yes |

# 8 Test Cases for Requirements

## 8.1 TC1 login

|  |  |
| --- | --- |
| **Test Category ID** | **Requirement 1**  Login |
| **Test Case ID** | TC1 |
| **Description (Main scenario)** | Successful Login |
| **Pre-condition** | User should Provide valid credentials. |
| **Steps** | 1. write username  2. provide a password |
| **Expected result** | Successfully Login on the system |
| **Alternative Scenario** | Failed registration “invalid password or email” |
| **Remarks** | No remarks |

## 8.2 TC2 **Course data:**

|  |  |
| --- | --- |
| **Test Category ID** | **Requirement 2**  Course Data |
| **Test Case ID** | TC2 |
| **Description (Main scenario)** | Select data and upload or the selected course or subject. |
| **Pre-condition** | user must be login into the system |
| **Steps** | 1. log in to the Teacher account  2. Select section and subject  3. select the data  4. click on upload |
| **Expected result** | Successfully selecting and uploading data in the course section. |
| **Alternative Scenario** | Failed to log in “invalid password or email” |
| **Remarks** | No remarks |

## 8.3 TC3 Marks check:

|  |  |
| --- | --- |
| **Test Category ID** | **Requirement 3**  Marks check |
| **Test Case ID** | TC3 |
| **Description (Main scenario)** | The students check their marks for each subject which they study. |
| **Pre-condition** | user must be login to the system. |
| **Steps** | 1. go to marks check option  2. select a subject  3. user get their marks |
| **Expected result** | Successfully get the marks of selected subject. |
| **Alternative Scenario** | Failed to log in “invalid password or email” |
| **Remarks** | No remarks |