**MSSE 682-Enterprise C# - Study Estimator Design Doc**

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Revision History

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| --- | --- | --- | --- |
| **Revision Number** | Date | **Author** | **Description** |
| 1 | 7/8/2012 | Paula Dawson | Initial Version |
| 2 | 7/28/2012 | Paula Dawson | Diagrams |

Introduction and Business Case

Study Costs in the pharmaceutical industry can be astronomical. An application is needed to house study costs so that companies can analyze costs prior to committing to a study startup budget and design. Studies will be broken down into cost parameters for instance number of sites, patients, lab costs etc... , and based on the current study design. The primary actor will be the Study Manager, but an application administrator will also be used.

Use Cases

The following are the prioritized use cases for this system:

* Create a study
* Add study parameter
* Analyze a study
* View a study
* Modify a study
* Modify study parameter
* Delete study parameter
* Add users
* Modify users
* Delete users
* Delete a study
* Retire a study
* Authenticate User

Figure - Use Case Diagram



**Use Case 1: Create a Study**

* **Primary Actor** – Study Manager
* **Stakeholders and Interests** – Outsourcing department
* **Pre-conditions** – The application has been successfully installed and is available on the cloud. User login is required to guarantee unauthorized users do not see the proprietary data.
* **Post-conditions (Success Guarantee)** – The study has successfully been created.
* **Main Success Scenario** 
  + Study Manager Logs in.
  + Study Manager hits Create New Study button.
  + Study Manager enters at a minimum all required study parameters.
  + Study Manager hits the Save button.
  + Return to the application’s Main screen
* **Alternate Scenarios / Extensions –** None.
* **Special Requirements** – None.
* **Technology and Data Variation List** – The technology for the user interface portion will be C# used as a cloud based application.
* **Frequency of Occurrence** – As frequently as the Study Manager creates a new study.
* **Open Issues –** None.

**Use Case 2: Analyze a Study**

The Study Manager logs into the system. The Study Manager will then choose a study to analyze by selecting it from a list of available studies. The Study Manager enters hits the analyze study button and the study will display showing where market value has been exceeded.

**Use Case 3: Add Study Parameter**

* **Main Success Scenario** 
  + Study Manager Logs in.
  + Study Manager hits the Administration button.
  + Study Manager hits the Add New Study Parameter button.
  + Study Manager enters all required fields.
  + Study Manager hits the save button.
  + Return to Study Parameter List.
* **Alternate Scenarios / Extensions** 
  + Study Parameter fails due to insufficient information and notifies the user of corrective action

**Use Case 4: View a Study**

After the Study Manager logs into the system and is authenticated they will choose a study from a list and hit the View Study button. The Study will open showing all assigned study parameters.

**Use Case 5: Modify a Study**

The Study Manager logs into the system and is authenticated, they will choose a study from a list and hit the Modify Study Button. After making changes the user will hit the Save button and be brought back to the Home page.

**Use Case 6: Modify Study Parameter**

The Study Manager logs into the system and is authenticated, they will hit the Administration button. Once in the Admin area the user will choose a study parameter from a list and hit the Modify Study parameter Button. After making changes the user will hit the Save button and be brought back to the Administration area.

**Use Case 7: Delete Study Parameter**

The Study Manager logs into the system and is authenticated, they will hit the Administration button. Once in the Admin area the user will choose a study parameter from a list and hit the Delete Study parameter Button. After making changes the user will be brought back to the Administration area.

**Use Case 8: Add users**

The Study Manager logs into the system and is authenticated, they will hit the Administration button. Once in the Admin area the user will hit the Add User button. The user will add a username, password and access level. After making changes the user will be brought back to the Administration area.

**Use Case 9: Modify users**

The Study Manager logs into the system and is authenticated, they will hit the Administration button. Once in the Admin area, the user will select a user and hit the Edit User button. After making changes the user will be brought back to the Administration area.

**Use Case 10: Delete users**

The Study Manager logs into the system and is authenticated, they will hit the Administration button. Once in the Admin area, the user will select a user and hit the Delete User button. After making changes the user will be brought back to the Administration area.

**Use Case 11: Delete a study**

After the Study Manager logs into the system and is authenticated they will choose a study from a list and hit the Delete Study button. The Study will be deleted and a list of Studies presented to the user.

**Use Case 12: Retire a study**

After the Study Manager logs into the system and is authenticated they will choose a study from a list and hit the Retire Study button. The Study will be marked as retired and a list of Active Studies presented to the user.

**Use Case 13: Authenticate User**

User will be prompted with a login screen, user will enter credentials and the system will check it against the database. Users with access will be allowed into the system with their assigned access level and users without access will be thrown from the system telling who to request access from.

Class Diagram – Manager, Study, Parameters



# Sequence Diagram CRUD Functions

