**Scenario 1:** Create A New Data Property.

**Include Use Case:** Access Database.

**Description:** The Scientist describes a new data property to be saved to the database for later use.

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen the option to describe a new property.

1. The system displays a form where the scientist can specify a scope, a pattern, a data file they wish to associate the data property with, and any other general comments he/she may have.
2. The scientist selects the save data property option.
3. The System accesses the database.
4. The database stores the user specified data property along with the scientist’s general information (i.e. name, number, place of study at the time, etc.) (Alt 1).
5. The system informs the user that the property has been saved to the database.
6. End of use case.

Alt 1

1. The database generates a message to the system signifying that the specified data property already exists in the database.
2. The system generates a message to the scientist that the specified data property already exists in the database and asks the user if they wish to view the property in the database.
3. The scientist choses the option to view the data property (Alt 2).
4. The system accesses the database to view the data property information.
5. The database retrieves the data property information and sends it to the system.
6. The system presents the user with the data property information.
7. The scientist closes the presented data property information.
8. Continue execution at step 6.

Alt 2

1. The scientist choses to not view the data property information.
2. Continue execution at step 6.

**Scenario 2:** Edit A Data Property.

**Include Use Case:** Access Database.

**Description:** The Scientist edits a data property that already exists in the database.

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen the option to edit a property.

1. The system accesses the database to get a list of data properties that are available for editing.
2. The database retrieves the list of data properties and sends the list to the system.
3. The system displays the list of data properties for editing and provides the user the choice to create a new data property (Alt 1).
4. The scientist specifies the data property they wish to edit.
5. The system accesses the database for the specific data property they wish to edit.
6. The database retrieves the specified data property the scientist wishes to edit and sends it to the system.
7. The system displays a filled in form containing the specified data property information.
8. The scientist makes the needed changes to the data property and choses to save the changes.
9. The system accesses the database to make the changes the scientist made.
10. The database changes the appropriate fields to the new data specified by the scientist and logs the change and adds the scientist’s information into the use log.
11. The system generates a message to the user that the changes have been made.
12. The scientist exits the edit mode.
13. End of use case.

Alt 1

1. The scientist choses to create a new data property.
2. Continue execution at scenario 1, step 1.

**Scenario 3:** Delete A Data Property.

**Include Use Case:** Access Database.

**Description:** The Scientist deletes data property from the database.

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen the option to describe a new property.

1. The system accesses the database to get a list of data properties that are available to be deleted.
2. The database retrieves the list of data properties and sends the list to the system.
3. The system displays the list of data properties for editing and provides the scientist the choice to create a new data property or to edit a data property (Alt 1) (Alt 2).
4. The scientist specifies the data property they wish to delete.
5. The system accesses the database for the specific data property they wish to delete.
6. The database retrieves the specified data property the scientist wishes to delete and sends it to the system.
7. The system displays a filled in form containing the specified data property information.
8. The scientist choses to delete the data property.
9. The system confirms if the user would like to delete the data property.
10. The scientist confirms the delete operation.
11. The system accesses the database to delete the specified data property.
12. The database deletes the specified data property.
13. The system generates a message to the user that the data property has been removed.
14. The scientist exits the delete mode.
15. End of use case.

Alt 1

1. The scientist choses to create a new data property.
2. Continue execution at scenario 1, step 1.

Alt 2

1. The scientist choses to edit a data property.
2. Continue execution at scenario 2, step 1.

**Scenario 4:** View Dataset.

**Include Use Case:** Access Database.

**Description:** The general public user can navigate to the system web interface and view limited information provided by the system.

**Actors:** General Public, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The general public user navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the general public to view.
2. The database retrieves the list of datasets available to the general public and sends it to the system.
3. The system displays the list of data sets available to the general public user to view.
4. The general public user specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the general public user wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The general public user closes the dataset and exits the web interface.
9. End of use case.

**Scenario 5:** General Public Saves Viewed Dataset.

**Include Use Case:** Access Database.

**Description:** The general public user can navigate to the system web interface and view limited information provided by the system and is able to save the presented dataset to the general public user’s computer.

**Actors:** General Public, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The general public user navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the general public to view.
2. The database retrieves the list of datasets available to the general public and sends it to the system.
3. The system displays the list of data sets available to the general public user to view.
4. The general public user specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the general public user wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The general public user selects to save the presented dataset to their computer.
9. The system asks the user where on their computer the user wishes to save the presented dataset.
10. The user specifies where the dataset is to be saved.
11. The system saves the dataset to the general user’s computer and generates a message to the user saying the save operation was complete.
12. The general public user closes the dataset and exits the web interface.
13. End of use case.

**Scenario 6:** General Public Prints Viewed Dataset.

**Include Use Case:** Access Database.

**Description:** The general public user can navigate to the system web interface and view limited information provided by the system.

**Actors:** General Public, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The general public user navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the general public to view.
2. The database retrieves the list of datasets available to the general public and sends it to the system.
3. The system displays the list of data sets available to the general public user to view.
4. The general public user specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the general public user wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The general public user choses to print the presented dataset.
9. The system asks the user information about the print job (printer to print from, number of copies, etc.).
10. The general public user enters the information and submits the information to the system.
11. The system sends the print job to the specified printer.
12. The general public user closes the dataset and exits the web interface.
13. End of use case.

**Scenario 7:** General Public Views Dataset In A Graphical Form.

**Include Use Case:** Access Database.

**Description:** The general public user can navigate to the system web interface and view limited information provided by the system.

**Actors:** General Public, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The general public user navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the general public to view.
2. The database retrieves the list of datasets available to the general public and sends it to the system.
3. The system displays the list of data sets available to the general public user to view.
4. The general public user specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the general public user wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The general public user selects the option to view the presented dataset in a graphical form
9. The system asks the user what type of graph they wish to see the dataset be presented as.
10. The general public user selects the graph they wish to see.
11. The system generates the user specified graph and presents it to the general public user.
12. The general public user closes the graph and dataset and exits the web interface.
13. End of use case.

**Scenario 8:** General Public Saves Dataset In A Graphical Form.

**Include Use Case:** Access Database.

**Description:** The general public user can navigate to the system web interface and view limited information provided by the system.

**Actors:** General Public, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The general public user navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the general public to view.
2. The database retrieves the list of datasets available to the general public and sends it to the system.
3. The system displays the list of data sets available to the general public user to view.
4. The general public user specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the general public user wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The general public user selects the option to view the presented dataset in a graphical form
9. The system asks the user what type of graph they wish to see the dataset be presented as.
10. The general public user selects the graph they wish to see.
11. The system generates the user specified graph and presents it to the general public user.
12. The general public user selects to save the presented dataset to their computer.
13. The system asks the user where on their computer the user wishes to save the presented dataset.
14. The user specifies where the dataset is to be saved.
15. The system saves the dataset to the general user’s computer and generates a message to the user saying the save operation was complete.
16. The general public user closes the graph and dataset and exits the web interface.
17. End of use case.

**Scenario 9:** General Public Prints Dataset In A Graphical Form.

**Include Use Case:** Access Database.

**Description:** The general public user can navigate to the system web interface and view limited information provided by the system.

**Actors:** General Public, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The general public user navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the general public to view.
2. The database retrieves the list of datasets available to the general public and sends it to the system.
3. The system displays the list of data sets available to the general public user to view.
4. The general public user specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the general public user wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The general public user selects the option to view the presented dataset in a graphical form
9. The system asks the user what type of graph they wish to see the dataset be presented as.
10. The general public user selects the graph they wish to see.
11. The system generates the user specified graph and presents it to the general public user.
12. The general public user chooses to print the graphical representation of the dataset.
13. The system asks the user information about the print job (printer to print from, number of copies, etc.).
14. The general public user enters the information and submits the information to the system.
15. The system sends the print job to the specified printer.
16. The general public user closes the graph and dataset and exits the web interface.
17. End of use case.

**Scenario 10:** Scientist View Dataset.

**Include Use Case:** Access Database.

**Description:** The Scientist can navigate to the system web interface and view limited information provided by the system.

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen the option to view a dataset.

1. The system accesses the database to get a list of datasets available to the scientist to view.
2. The database retrieves the list of datasets available to the scientist and sends it to the system.
3. The system displays the list of data sets available to the scientist to view.
4. The scientist specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the scientist wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The scientist closes the dataset and exits the web interface.
9. End of use case.

**Scenario 11:** Scientist Saves Viewed Dataset.

**Include Use Case:** Access Database.

**Description:** The scientist can navigate to the system web interface and view limited information provided by the system and is able to save the presented dataset to the scientist’s computer.

**Actors:** Scientist, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The scientist navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the scientist to view.
2. The database retrieves the list of datasets available to the scientist and sends it to the system.
3. The system displays the list of data sets available to the scientist to view.
4. The scientist specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the scientist wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The scientist selects to save the presented dataset to their computer.
9. The system asks the user where on their computer the user wishes to save the presented dataset.
10. The user specifies where the dataset is to be saved.
11. The system saves the dataset to the general user’s computer and generates a message to the user saying the save operation was complete.
12. The scientist closes the dataset and exits the web interface.
13. End of use case.

**Scenario 12:** Scientist Prints Viewed Dataset.

**Include Use Case:** Access Database.

**Description:** The scientist can navigate to the system web interface and view limited information provided by the system.

**Actors:** Scientist, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The scientist navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the scientist to view.
2. The database retrieves the list of datasets available to the scientist and sends it to the system.
3. The system displays the list of data sets available to the scientist to view.
4. The scientist specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the scientist wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The scientist choses to print the presented dataset.
9. The system asks the user information about the print job (printer to print from, number of copies, etc.).
10. The scientist enters the information and submits the information to the system.
11. The system sends the print job to the specified printer.
12. The scientist closes the dataset and exits the web interface.
13. End of use case.

**Scenario 13:** Scientist Views Dataset In A Graphical Form.

**Include Use Case:** Access Database.

**Description:** The scientist can navigate to the system web interface and view limited information provided by the system.

**Actors:** Scientist, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The scientist navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the scientist to view.
2. The database retrieves the list of datasets available to the scientist and sends it to the system.
3. The system displays the list of data sets available to the scientist to view.
4. The scientist specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the scientist wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The scientist selects the option to view the presented dataset in a graphical form
9. The system asks the user what type of graph they wish to see the dataset be presented as.
10. The scientist selects the graph they wish to see.
11. The system generates the user specified graph and presents it to the scientist.
12. The scientist closes the graph and dataset and exits the web interface.
13. End of use case.

**Scenario 14:** Scientist Saves Dataset In A Graphical Form.

**Include Use Case:** Access Database.

**Description:** The scientist can navigate to the system web interface and view limited information provided by the system.

**Actors:** Scientist, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The scientist navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the scientist to view.
2. The database retrieves the list of datasets available to the scientist and sends it to the system.
3. The system displays the list of data sets available to the scientist to view.
4. The scientist specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the scientist wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The scientist selects the option to view the presented dataset in a graphical form
9. The system asks the user what type of graph they wish to see the dataset be presented as.
10. The scientist selects the graph they wish to see.
11. The system generates the user specified graph and presents it to the scientist.
12. The scientist selects to save the presented dataset to their computer.
13. The system asks the user where on their computer the user wishes to save the presented dataset.
14. The user specifies where the dataset is to be saved.
15. The system saves the dataset to the general user’s computer and generates a message to the user saying the save operation was complete.
16. The scientist closes the graph and dataset and exits the web interface.
17. End of use case.

**Scenario 15:** Scientist Prints Dataset In A Graphical Form.

**Include Use Case:** Access Database.

**Description:** The scientist can navigate to the system web interface and view limited information provided by the system.

**Actors:** Scientist, Database.

**Pre-Condition:** N/a

**Trigger Condition:** The scientist navigates to the systems’ web interface and choses to view datasets.

1. The system accesses the database to get a list of datasets available to the scientist to view.
2. The database retrieves the list of datasets available to the scientist and sends it to the system.
3. The system displays the list of data sets available to the scientist to view.
4. The scientist specifies which dataset they wish to view.
5. The system accesses the database to get the information of the dataset the scientist wishes to view.
6. The database retrieves the dataset information and sends it to the system.
7. The system displays the dataset information for the user to view.
8. The scientist selects the option to view the presented dataset in a graphical form
9. The system asks the user what type of graph they wish to see the dataset be presented as.
10. The scientist selects the graph they wish to see.
11. The system generates the user specified graph and presents it to the scientist.
12. The scientist chooses to print the graphical representation of the dataset.
13. The system asks the user information about the print job (printer to print from, number of copies, etc.).
14. The scientist enters the information and submits the information to the system.
15. The system sends the print job to the specified printer.
16. The scientist closes the graph and dataset and exits the web interface.
17. End of use case.

**Scenario 16:** Edit a File Format

**Include Use Case:** Access Database.

**Description:** The Scientist chooses to edit an existing file format

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen the option to edit an existing file format.

1. The system displays a form where the scientist can specify which part of the formatting they would like to edit.
2. The scientist selects the save file format option. (Alt 1)
3. The System accesses the database.
4. The database stores the new information of the file format.
5. The system informs the user that the file format has been saved to the database.
6. End of use case.

Alt 1

1. The database generates a message to the system signifying that the specified file format could not be saved due to connectivity issues with the database.
2. The scientist choses the retry option to save the file format (Alt 2).
3. Continue execution at step 2.

Alt 2

1. The scientist choses to not retry saving the file format.
2. Continue execution at step 6.

**Scenario 17:** Create a File Format

**Include Use Case:** Access Database.

**Description:** The Scientist chooses to create file format

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen the option to create a new file format.

1. The system displays a form where the scientist can specify how the data should be formatted.
2. The scientist selects the save file format option. (Alt 1)
3. The System accesses the database.
4. The database stores the information of the file format along with the scientist’s general information (i.e. name, number, place of study at the time, etc.) (Alt 1).
5. The system informs the user that the file format has been saved to the database.
6. End of use case.

Alt 1

1. The database generates a message to the system signifying that the specified file format could not be saved.
2. The scientist choses the retry option to save the file format (Alt 2).
3. Continue execution at step 2.

Alt 2

1. The scientist choses to not retry saving the file format.
2. Continue execution at step 6.

**Scenario 18:** Remove a File Format

**Include Use Case:** Access Database.

**Description:** The Scientist chooses to remove an existing file format

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen the option to remove a file format.

1. The system displays a form where the scientist can specify which file format they would like to remove.
2. The scientist selects the file format to be removed option. (Alt 1)
3. The System accesses the database.
4. The database removes the information of the file format (Alt 1).
5. The system informs the user that the file format has been removed to the database.
6. End of use case.

Alt 1

1. The database generates a message to the system signifying that the specified file format could not be removed due to a connection issue.
2. The scientist choses the retry option to remove the file format (Alt 2).
3. Continue execution at step 2.

Alt 2

1. The scientist choses to not retry saving the file format.
2. Continue execution at step 6.

**Scenario 19:** Specify and Parse a File Format

**Include Use Case:** Access Database.

**Description:** The Scientist chooses to specify and parse a file format

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen the option to specify and parse a file format.

1. The system displays a form where the scientist can specify which file format they would like to parse.
2. The scientist selects the file format to be parsed. (Alt 1)
3. The System accesses the database.
4. The database selects the information of the file format to be parsed (Alt 1).
5. The system informs the user that the file format has been selected and is going to be parsed. Once the file has been parsed the system will access the database.
6. The database stores the parsed file for later use
7. End of use case.

Alt 1

1. The database generates a message to the system signifying that the specified file format could not be parsed due to a connection issue.
2. The scientist choses the retry option (Alt 2).
3. Continue execution at step 2.

Alt 2

1. The scientist choses to not retry parsing the file format.
2. Continue execution at step 6.

**Scenario 20:** Verify dataset with New Property, New Description, and New Dataset.

**Include Use Case:** Access Database.

**Description:** The Scientist wants to do a new analysis of a dataset with all new information

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system, the scientist is a registered user of the system, the scientist has selected the analyze button from a previous menu.

**Trigger Condition:** The scientist has chosen the following three options: new property, new file format, new dataset.

1. Execution starts at Scenario 1, step1.
2. The Scientist confirms to keep new property (Alt 1).
3. Execution continues to Scenario 17, step 1
4. The Scientist confirms to keep new file format (Alt 2).
5. System displays file selector menu.
6. Scientist selects file to be parse.
7. Execution continues to Scenario 19 step 1.
8. The Scientist confirms to keep new dataset (Alt 3).
9. System enables the analyze button.
10. The Scientist presses the analyze button.
11. The System analyzes the dataset.
12. Execution continues to Scenario 14, step 8 (Alt 4).
13. End of use case.

Alt 1.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to pre-trigger conditions and exits scenario.

Alt 2.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 3.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 4.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 1.

**Scenario 21:** Verify dataset with New Property, New Description, and Saved Dataset.

**Include Use Case:** Access Database.

**Description:** The Scientist wants to do a new analysis of a saved dataset with new properties and new description information

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system, the scientist is a registered user of the system, the scientist has selected the analyze button.

**Trigger Condition:** The scientist has chosen the following three options: new property, new file format, Open dataset.

1. Execution starts at Scenario 1, step1.
2. The Scientist confirms to keep new property (Alt 1).
3. Execution continues to Scenario 17, step 1.
4. The Scientist confirms to keep new file format (Alt 2).
5. System displays file selector menu.
6. Scientist selects file to be parse.
7. Execution continues to Scenario 11, step 1.
8. The Scientist confirms to keep new dataset (Alt 3).
9. System enables the analyze button.
10. The Scientist presses the analyze button.
11. The System analyzes the dataset.
12. Execution continues to Scenario 14, step 8 (Alt 4).
13. End of use case.

Alt 1.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to pre-trigger conditions and exits scenario.

Alt 2.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 3.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 4.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 1.

**Scenario 22:** Verify dataset with New Property, Saved Description, and New Dataset.

**Include Use Case:** Access Database.

**Description:** The Scientist wants to do a new analysis of a dataset using a saved file description

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system, the scientist is a registered user of the system, the scientist has selected the analyze button from a previous menu.

**Trigger Condition:** The scientist has chosen the following three options: new property, new file format, Open dataset.

1. Execution starts at Scenario 1, step1.
2. The Scientist confirms to keep new property (Alt 1).
3. Execution continues to Scenario 17.
4. The Scientist confirms to keep new file format (Alt 2).
5. System displays file selector menu.
6. Scientist selects file to be parse.
7. Execution continues to Scenario 10, step 1.
8. The Scientist confirms to keep new dataset (Alt 3).
9. System enables the analyze button.
10. The Scientist presses the analyze button.
11. The System analyzes the dataset.
12. Execution continues to Scenario 14, step 8 (Alt 4).
13. End of use case.

Alt 1.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to pre-trigger conditions and exits scenario.

Alt 2.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 3.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 4.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 1.

**Scenario 23:** Verify dataset with New Property, Saved Description, and Saved Dataset.

**Include Use Case:** Access Database.

**Description:** The Scientist wants to do a new analysis of a dataset using a saved file description and saved dataset.

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system, the scientist is a registered user of the system, the scientist has selected the analyze button from a previous menu.

**Trigger Condition:** The scientist has chosen the following three options: new property, new file format, Open dataset.

1. Execution starts at Scenario 1, step1.
2. The Scientist confirms to keep new property (Alt 1).
3. Execution continues to Scenario 28.
4. The Scientist confirms to keep new file format (Alt 2).
5. System displays file selector menu.
6. Scientist selects file to be parse.
7. Execution continues to Scenario 10, step 1.
8. The Scientist confirms to keep new dataset (Alt 3).
9. System enables the analyze button.
10. The Scientist presses the analyze button.
11. The System analyzes the dataset.
12. Execution continues to Scenario 13, step 8 (Alt 4).
13. End of use case.

Alt 1.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to pre-trigger conditions and exits scenario.

Alt 2.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 3.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 4.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 1.

**Scenario 24:** Verify dataset with Saved Property, New Description, and New Dataset.

**Include Use Case:** Access Database.

**Description:** The Scientist wants to do a new analysis of a new dataset using saved properties

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system, the scientist is a registered user of the system, the scientist has selected the analyze button from a previous menu.

**Trigger Condition:** The scientist has chosen the following three options: new property, new file format, Open dataset.

1. Execution starts at Scenario 29, step1.
2. The Scientist confirms to keep new property (Alt 1).
3. Execution continues to Scenario17, step 1.
4. The Scientist confirms to keep new file format (Alt 2)
5. System displays file selector menu.
6. Scientist selects file to be parse.
7. Execution continues to Scenario 19, step 1.
8. The Scientist confirms to keep new dataset (Alt 3).
9. System enables the analyze button.
10. The Scientist presses the analyze button.
11. The System analyzes the dataset.
12. Execution continues to Scenario 14, step 8 (Alt 4).
13. End of use case.

Alt 1.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to pre-trigger conditions and exits scenario.

Alt 2.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 3.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 4.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 1.

**Scenario 25:** Verify dataset with Saved Property, New Description, and Saved Dataset.

**Include Use Case:** Access Database.

**Description:** The Scientist wants to do a new analysis of a new dataset using saved properties

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system, the scientist is a registered user of the system, the scientist has selected the analyze button from a previous menu.

**Trigger Condition:** The scientist has chosen the following three options: new property, new file format, Open dataset.

1. Execution starts at Scenario 29, step1.
2. The Scientist confirms to keep new property (Alt 1).
3. Execution continues to Scenario 1, step 1.
4. The Scientist confirms to keep new file format (Alt 2).
5. System displays file selector menu.
6. Scientist selects file to be parse.
7. Execution continues to Scenario 10, step 1.
8. The Scientist confirms to keep new dataset (Alt 3).
9. System enables the analyze button.
10. The Scientist presses the analyze button.
11. The System analyzes the dataset.
12. Execution continues to Scenario 14, step 8 (Alt 4).
13. End of use case.

Alt 1.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to pre-trigger conditions and exits scenario.

Alt 2.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 3.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 4.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 1.

**Scenario 26:** Verify dataset with Saved Property, Saved Description, and New Dataset.

**Include Use Case:** Access Database.

**Description:** The Scientist wants to do a new analysis of a new dataset using saved properties and a saved description of a file

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system, the scientist is a registered user of the system, the scientist has selected the analyze button from a previous menu.

**Trigger Condition:** The scientist has chosen the following three : new property, new file format, Open dataset.

1. Execution starts at Scenario 29, step1.
2. The Scientist confirms to keep new property (Alt 1).
3. Execution continues to Scenario<< Open a File Description >>.
4. The Scientist confirms to keep new file format (Alt 2).
5. System displays file selector menu.
6. Scientist selects file to be parse.
7. Execution continues to Scenario 28, step 1.
8. The Scientist confirms to keep new dataset (Alt 3).
9. System enables the analyze button.
10. The Scientist presses the analyze button.
11. The System analyzes the dataset.
12. Execution continues to Scenario 14, step 8 (Alt 4).
13. End of use case.

Alt 1.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to pre-trigger conditions and exits scenario.

Alt 2.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 3.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 4.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 1.

**Scenario 27:** Verify dataset using a Saved Property, Saved Description, and saved Dataset.

**Include Use Case:** Access Database.

**Description:** The Scientist wants to do a new analysis of a new dataset using saved properties and a saved description of a file

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system, the scientist is a registered user of the system, the scientist has selected the analyze button from a previous menu.

**Trigger Condition:** The scientist has chosen the following three options: new property, new file format, Open dataset.

1. Execution starts at Scenario 29, step1.
2. The Scientist confirms to keep new property (Alt 1).
3. Execution continues to Scenario 28, step 1.
4. The Scientist confirms to keep new file format (Alt 2).
5. System displays file selector menu.
6. Scientist selects file to be parse.
7. Execution continues to Scenario 10, step 1.
8. The Scientist confirms to keep new dataset (Alt 3).
9. System enables the analyze button.
10. The Scientist presses the analyze button.
11. The System analyzes the dataset.
12. Execution continues to Scenario 14, step 8 (Alt 4).
13. End of use case.

Alt 1.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to pre-trigger conditions and exits scenario.

Alt 2.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 3.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 3.

Alt 4.

1. The scientist cancels save feature.
2. System deletes save info from database and returns to step 1.

**Scenario 28:** Open a File Description

**Include Use Case:** Access Database.

**Description:** The Scientist chooses to open an existing file format

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen the option to open a file format.

1. The system displays a form where the scientist can specify which file format they would like to select.
2. The scientist selects the file format to be removed option. (Alt 1)
3. The System accesses the database.
4. The database returns the information of the file format (Alt 1).
5. The system informs the user that the file format has been successfully retrieved from the database.
6. End of use case.

Alt 1

1. The database generates a message to the system signifying that the specified file format could not be found due to a connection issue.
2. The scientist choses the retry option to find the file format (Alt 2).
3. Continue execution at step 2.

Alt 2

1. The scientist choses to not retry selecting the file format.
2. Continue execution at step 6.

**Scenario 29:** Select A Data Property.

**Include Use Case:** Access Database.

**Description:** The Scientist selects a data property that already exists in the database.

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen the option to select a saved a property.

1. The system accesses the database to get a list of data properties that are available.
2. The database retrieves the list of data properties and sends the list to the system.
3. The system displays the list of data properties.
4. The scientist specifies the data property they wish to select.
5. The system accesses the database for the specific data property they selected.
6. The database retrieves the specified data property the scientist selected and sends it to the system.
7. The system generates a message to the user that the selection was successful.
8. End of use case.

**Scenario 30:** Scientist Displays Analyzed Dataset

**Include Use Case:** Access Database.

**Extend Use Case:** Describe Properties, Describe File Format, Analyze Anomaly, Parse Raw Data Files.

**Description:** The Scientist chooses to display the analyzed data file.

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen a data property and an appropriate dataset and has chosen the option to display the analyzed dataset.

1. The system presents the scientist with the analyzed dataset.
2. Start execution of solution 10, 11, 12, 13, 14, or 15 to view, print, save, view as a graph, save the graph, or print the graph of the dataset.
3. End of use case.

**Scenario 31:** Scientist Cancels Alerted anomaly

**Include Use Case:** Access Database.

**Extend Use Case:** Describe Properties, Describe File Format, Analyze Anomaly, Parse Raw Data Files.

**Description:** The Scientist chooses to a particular anomaly alert associated with a datum.

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen a data property and an appropriate dataset and has chosen the option to display the analyzed dataset.

1. The system presents the scientist with a list of found anomalies.
2. The scientist analyzes each anomaly and determines if an anomaly is a true anomaly or a false anomaly (meaning is it a malfunctioning sensor) and disables the anomaly alert next to the datum.
3. The system reflects the change and takes out the disabled anomaly alert.
4. End of use case.

**Scenario 32:** Scientist Views Alerted anomaly

**Include Use Case:** Access Database.

**Extend Use Case:** Describe Properties, Describe File Format, Analyze Anomaly, Parse Raw Data Files.

**Description:** The Scientist chooses to view anomaly alert generated when the analysis of a data file is complete.

**Actors:** Scientist, Database.

**Pre-Condition:** The scientist has logged on to the system and the scientist is a registered user of the system.

**Trigger Condition:** The scientist has chosen to view the generated anomaly alerts after a data has been analyzed by the system using the data property.

1. The system presents the scientist with a message signaling that the analyzed data file contains a list of anomalies
2. The scientist chooses to view the list of anomalies
3. The system presents the user with the list of anomalies.
4. End of use case.