**CMIS-4900-400**

**Fall 2025**

**Team 2 Project User Stories**

1. As a manager, I want to search by part number so that I can view the customer name, operator name, part number, quantity, date received, date due, operations, and purchase order number for the part number entered in the search box, along with a count of how many records are returned by the search.

**Acceptance Criteria:**

**Given** the search interface, **when** a manager selects “Search by Part Number” from the drop-down menu listing search types, and enters a part number of “3156018H03” into the search text box, **then** the results include rows whose PART\_NUMBER = 3156018H03, showing CUSTOMER\_NAME, OPERATOR\_NAME, PART\_NUMBER, QTY, DATE\_RECEIVED, DATE\_DUE, OPERATIONS, and PURCHASE\_ORDER\_NUMBER, with an accompanying “Number of Records: #” next to the search button.

**Given** no matches, **when** the manager filters by PART\_NUMBER = BADNUM111, **then** the manager will see 0 results and a “Number of Records: 0” notice in the user interface.

**Given** an invalid input, **when** the manager filters by PART\_NUMBER = 315%515, **then** they will see a validation error message, informing the manager that part numbers must only contain letters, numbers, and hyphens.

1. As a manager, I want to search by a range of due dates so that I can view customer name, operator name, part number, quantity, date received, date due, operations, and purchase order number for records whose due date range falls within the range entered in the search box, along with a count of how many records are returned by the search.

**Acceptance Criteria:**

**Given** the search interface, **when** a manager selects “Search by Due Date Range” from the drop-down menu listing search types, and enters a due date range of “3/1/2024-5/1/2024” into the search text box, **then** the results include rows whose DATE\_DUE falls within the range of “3/1/2024-5/1/2024” showing CUSTOMER\_NAME, OPERATOR\_NAME, PART\_NUMBER, QTY, DATE\_RECEIVED, DATE\_DUE, OPERATIONS, and PURCHASE\_ORDER\_NUMBER, with an accompanying “Number of Records: #” next to the search button.

**Given** an invalid date range (beg > end), **when** the manager runs the search, **then** they see a validation error message, informing the manager that the input is in the incorrect format, what the correct format is, and no query executes.

**Given** an invalid date range (3/1/2024-5/1/202) or empty date range, **when** the manager runs the search, **then** they see a validation error message, informing the manager that the input is in the incorrect format, what the correct format is, and no query executes.

1. As a manager, I want to search by operator name, so that I can view customer name, operator name, part number, quantity, date received, date due, operations, and purchase order number for the operator’s name, along with a count of how many records are returned by the search.

**Acceptance Criteria:**

**Given** the search interface, **when** a manager selects “Search by Operator Name” from the drop-down menu listing search types, and selects an operator name of from a second drop down list whose values are populated from the OPERATORS table using OPERATOR\_ID and OPERATOR\_NAME, **then** the results include rows whose OPERATOR\_ID from the OPERATORS table matches the foreign key OPERATOR\_ID on the PART\_HISTORY bridging table, showing CUSTOMER\_NAME, OPERATOR\_NAME, PART\_NUMBER, QTY, DATE\_RECEIVED, DATE\_DUE, OPERATIONS, and PURCHASE\_ORDER\_NUMBER, with an accompanying “Number of Records: #” next to the search button.

1. As a manager, I want to search by department, so that I can view customer name, operator name, part number, quantity, date received, date due, operations, and purchase order number for a department, along with a count of how many records are returned by the search.

**Acceptance Criteria:**

**Given** the search interface, **when** a manager selects “Search by Fabrication” or “Search by Machine Shop” from the drop-down menu listing search types, **then** the results include rows whose OPERATOR\_ID from the OPERATORS table matches the foreign key OPERATOR\_ID on the PART\_HISTORY bridging table and JOB\_ID from the JOBS table matches the foreign key JOBS\_ID on the OPERATORS table, where each JOB\_ID assigned to each OPERATOR\_ID represents the corresponding department the OPERATOR\_ID is assigned to, showing CUSTOMER\_NAME, OPERATOR\_NAME, PART\_NUMBER, QTY, DATE\_RECEIVED, DATE\_DUE, OPERATIONS, and PURCHASE\_ORDER\_NUMBER, with an accompanying “Number of Records: #” next to the search button.

1. As a manager of the fabrication or machine shop department, I want to **create, update, and (soft) delete** records in the PART\_HISTORY table with **controlled picks** such as customer, operator, and operations to maintain the consistency of data in the PART\_HISTORY table.

**Acceptance Criteria:**

**Given** the search interface, **when** a manager wants to create a new record on the PART\_HISTORY table, **then** the manager will click a button on the search interface titled “Create New Record”, and a corresponding interface will open in a new window with a form for the manager to enter in required values for new record creation.

**Given** the search interface, **when** a manager wants to update an existing record after a search query to change values, **then** the manager will right click on the record and select “Update Record”, and a corresponding interface will open in a new window with a form for the manager to enter in required values for record updates.

**Given** the search interface, **when** a manager wants to delete an existing record after a search query, **then** the manager will right click on the record and select “Delete Record.”

* **Delete** will function as a soft delete, where an additional attribute titled TO\_DELETE on the PART\_HISTORY table with a Boolean value of TRUE will flag the record for deletion. This column will be hidden from the user, and only records with a value of FALSE will return as a search query result. By default, all newly created records will have TO\_DELETE set to FALSE.
* **Create** and **update** require the fields of CUSTOMER\_ID, PART\_NUMBER, DATE\_DUE, PURCHASE\_ORDER\_NUMBER, QTY, OPERATOR\_ID, OPERATIONS, and DATE\_RECEIVED.
* The values for CUSTOMER\_ID, OPERATOR\_ID, and OPERATIONS will be selected from a drop-down menu as controlled picks. The values for CUSTOMER\_ID and OPERATOR\_ID will be populated using the CUSTOMERS and OPERATORS table, the OPERATIONS value will be hardcoded.
* Uniqueness constraints on the PART\_HISTORY table will be enforced using an auto incremented index value for each record on the PART\_HISTORY table, ensuring record uniqueness and preventing the occurrence of duplicate records. Resequencing will not occur in the event of a record deletion.
* Hard delete privileges will be restricted to the Database Administrator access.
* **Create, update, and delete** queries will be captured in a transaction log, noting the user, timestamp, and changed values.

1. As a manager of any department, I want **field-level validation** with clear and descriptive messages to describe how data should be entered so I don’t submit bad data into text fields.

**Acceptance Criteria:**

**Given** the search interface, **when** a manager uses a selected search query and inputs invalid data, **then** the manager will be alerted that the search parameter has violated a validation constraint and must be corrected before the query executes, examples include:

* An alert box displaying the message “Please enter Part Number containing letters, numbers, and hyphens only.”
* An alert box displaying the message “Please enter date format as mm/dd/yy-mm/dd/yy.”
* An alert box displaying the message “Beginning date occurs after ending date. Please enter as (Beginning Date)1/1/2024-(Ending Date)3/1/2024”.

**Given** the search interface, **when** a manager wants to **create** or **update** a record and inputs invalid data in required fields, **then** the manager will be alerted that the input field has violated a validation constraint and must be corrected before a record can be created or updated.

* The required fields for text input are PART\_NUMBER, DATE\_DUE, PURCHASE\_ORDER\_NUMBER, QTY, and DATE\_RECEIVED.
* The required fields of CUSTOMER\_ID, OPERATOR\_ID, and OPERATIONS will be controlled picks implemented using a drop-down menu.
* An inline error message displaying the message “Quantity must be greater than 0.” QTY(INT) > 0.
* An inline error message displaying the message “Please enter Part Number containing letters, numbers, and hyphens only.”
* An inline error message displaying the message “Purchase Order Number must be alphanumeric only, use of special characters is prohibited.”
* An inline error message displaying the message “Date Due must be of the format mm/dd/yy.”
* An inline error message displaying the message “Date Received must of the format mm/dd/yy.”

**Given** the search interface, **when** a manager wants to **create** or **update** a record, only the authorized users of the Machine Shop and Fabrication departments can **create, update, or delete**. Quality and Shipping department managers will have read-only access.

1. As a manager of any department, I want the results to be paged and not continuously scrolled, so that I can click on the columns and have them reorganize the page in a descending order depending on which column I click on.

**Acceptance Criteria:**

**Given** the search interface, **when** a manager performs a search query, and the record results are returned to the search interface, **then** a manager will see a search interface that shows the record results in a paged order, whose columns can be clicked to organize the records in descending or ascending order depending on which column the manager clicks.

* **Given** the search query results that contain a number of records greater than 50, **when** a manager views the returned records, **then** the results will be organized in pages, where each page stores up to 50 results, and a manager can click on each attribute column of the results page to sort by the selected column in a descending or ascending order.
* **Given** the search query results that contain a number of records greater than or equal to 1,000, **when** a manager views the returned records, **then** the results of the query will be displayed to the manager in a time of less or equal to 10 seconds.
* **Given** the search query results that contain a number of records less than 1,000, **when** a manager views the returned records, **then** the results of the query will function with a median query time of less than 2 seconds.