**CMIS-4900-400**

**Team 2**

**Production Data Information System**

**DFD LVL 1**

**A diagram of a computer

AI-generated content may be incorrect.**

**Data Dictionary:**

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| **Label:** | USER AUTH & ROLE AUTH |
| **Entry Type:** | Process |
| **Description:** | Authenticate department manager user interfaces through user and role verification to grant role-based action privileges on the PART\_HISTORY table within the database. |
| **Process #:** | 1 |
| **Process Description:** | Input Data Flows:   1. DEPARTMENT MANAGER USER AUTHENTICATION 2. USER APPROVED & ROLE ACCESS GRANTED   Output Data Flows:   1. VERIFY USER & ROLE 2. AUTHENTICATION SUCCESS ACCESS APPROVAL   RECEIVE the DEPARTMENT MANAGER AND USER AUTHENTICATION from the DEPARTMENT USER INTERFACE.  VERIFY the USER & ROLE with the ACTIVE DIRECTORY entity.  RECEIVE USER APPROVED & ROLE ACCESS GRANTED from the ACTIVE DIRECTORY.  SEND the AUTHENTICATION SUCCESS ACCESS APPROVAL to the DEPARTMENT USER INTERFACE. |
| **Notes:** | Process 1 must take place before manager entities may submit CRUD requests to the system.  Approved Roles:   * Fabrication & Machine Shop: C/R/U/D Requests with soft-delete privileges. * Quality & Shipping: Ready Only privileges. |

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| **Label:** | VIEW PRODUCTION RECORDS |
| **Entry Type:** | Process |
| **Description:** | Query the system to search by parameters such as PART NUMBER, DUE DATE RANGE, OPERATOR NAME, and DEPARTMENT. Receive the query results from the system which returns CUSTOMER\_NAME, OPERATOR\_NAME, PART\_NUMBER, QTY, DATE\_RECEIVED, DATE\_DUE, OPERATIONS, and PURCHASE\_ORDER\_NUMBER. |
| **Process #:** | 2 |
| **Process Description:** | Input Data Flows:   1. SEARCH CRITERIA:  * PART NUMBER * DUE DATE RANGE * OPERATOR NAME * DEPARTMENT.  1. SQL SELECT QUERY RESULTS (READ ACKNOWLEDGEMENTS)   Output Data Flows:   1. SQL SELECT QUERY (READ REQUESTS) 2. SEARCH RESULTS:  * CUSTOMER\_NAME, OPERATOR\_NAME * PART\_NUMBER, QTY * DATE\_RECEIVED, DATE\_DUE * OPERATIONS, PURCHASE\_ORDER\_NUMBER  1. INPUT VALIDATION ERROR MESSAGE   RECEIVE the SEARCH CRITERIA from the DEPARTMENT USER INTERFACES entity.  SEND the SQL SELECT QUERY (READ REQUESTS) to the PRODUCTION DATA DATABASE where the PART\_HISTORY table is located.  RECEIVE the SQL SELECT QUERY RESULTS (READ ACKNOWLEDGEMENTS) from the PRODUCTION DATA DATABASE where the PART\_HISTORY table is located.  SEND the SEARCH RESULTS to the DEPARTMENT USER INTERFACES entity.  SEND the INPUT VALIDATION ERROR MESSAGE to the DEPARTMENT USER INTERFACES entity when SEARCH CRITERIA required field input fails validation constraints. |
| **Notes:** | Process 1 must take place before process 2.  Approved Roles:   * Fabrication & Machine Shop. * Quality & Shipping. |

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| **Label:** | MODIFY PRODUCTION RECORDS |
| **Entry Type:** | Process |
| **Description:** | Query the system to CREATE new records, UPDATE existing records, and (soft) DELETE existing records. |
| **Process #:** | 3 |
| **Process Description:** | Input Data Flows:   1. WO C/U/D REQUEST 2. INSERT, UPDATE, DELETE QUERY SUCCESS   Output Data Flows:   1. INSERT, UPDATE, DELETE QUERY 2. WO C/U/D ACKNOWLEDGEMENTS 3. INPUT VALIDATION ERROR MESSAGE   RECEIVE the WO C/U/D REQUEST from the DEPARTMENT USER INTERFACES entity.  SEND the INSERT, UPDATE, DELETE QUERY to the PRODUCTION DATA DATABASE.  RECEIVE the INSERT, UPDATE, DELETE QUERY SUCCESS notice from the PRODUCTION DATA DATABASE.  SEND the WO C/U/D ACKNOWLEDGEMENTS to the DEPARTMENT USER INTERFACES entity.  SEND the INPUT VALIDATION ERROR MESSAGE to the DEPARTMENT USER INTERFACES entity when WO C/U/D REQUEST required field input fails validation constraints. |
| **Notes:** | Process 1 must take place before process 3.  Approved Roles:   * Fabrication & Machine Shop: Full C/R/U/D with soft-delete access privileges. |

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| **Label:** | AUDIT LOGGING |
| **Entry Type:** | Process |
| **Description:** | Record Create, Update, and Delete (soft) transactions from Fabrication & Machine Shop departments. Update the audit log file stored in directory on server that hosts database. |
| **Process #:** | 4 |
| **Process Description:** | Input Data Flows:   1. RECORDED C/U/D TRANSACTIONS   Output Data Flows:   1. AUDIT LOG UPDATES   RECEIVE the C/U/D TRANSACTIONS from the PRODUCTION DATA DATABASE.  SEND the AUDIT LOG UPDATES to the AUDIT LOG. |
| **Notes:** | C/U/D transactions are recorded daily and are sent to the AUDIT LOG at the time they are recorded. |

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| **Label:** | DATA MIGRATION UTILITY |
| **Entry Type:** | Process |
| **Description:** | Import Legacy Data from previous Microsoft Access Database in a .CSV file format. |
| **Process #:** | 5 |
| **Process Description:** | Input Data Flows:   1. CSV EXPORT FILE   Output Data Flows:   1. IMPORTED CSV FILE   RECEIVE the CSV EXPORT FILE from the LEGACY DATA SOURCE.  SEND the IMPORTED CSV FILE to the PRODUCTION DATA DATABASE. |
| **Notes:** | .CSV file to be imported using MySQL DBMS import utility for record transfer. |

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| **Label:** | BACKUP & RESTORE SCHEDULER |
| **Entry Type:** | Process |
| **Description:** | Create MySQLDump files as backup copies for Database restoration on a nightly schedule in the event of hardware or software failure. |
| **Process #:** | 6 |
| **Process Description:** | Input Data Flows:   1. DB IMAGE WITH BACKUP DATA   Output Data Flows:   1. DB BACKUP FILE   RECEIVE the DB IMAGE WITH BACKUP DATA from the PRODUCTION DATA DATABASE.  SEND the DB BACKUP FILE to the BACKUP ARCHIVE. |
| **Notes:** | The BACKUP ARCHIVE will be a directory on the servers storage device dedicated to storing copies of the DB BACKUP FILE for future retrieval and restoration needs if necessary. |