**CSE213 CRA Report**

| **Topic: Simulation of operation of a private Power Generation company** | | |
| --- | --- | --- |
| **ID: 2120104** | **Name: Farhan Tamzid** | **User1: Engineer** |
| **User2: Human Resource Manager** |
| **ID: 2220038** | **Name: Nahidul Islam Peyal** | **User3: Customer** |
| **User4: Finance Manager** |
|  |  |  |
|  |
| **ID: 1930921** | **Name: SK Sadia Tasnim Elma** | **User7: Data Analyst** |
| **User8: Environmental Compliance Officers** |

**Event types:**

* UIE - - user input to trigger event
* UID - - user input to be considered as data
* OP – display content (output)
* PC – prerequisite check
* VL – validation check
* VR – verification check
* DP – fetching data from file system and process it to get some calculated outcome (data processing)

**Common Goals:**

| **Process-1: Login** | | |  |
| --- | --- | --- | --- |
|  |  | | **Event Type** |
| **Workflow:** | **event-1** | **User will input userID and password into two given text fields.**  **A log in button will be present.** | **UID** |
|  | **event-2** | **The login button is selected, The given data will then be validated. (7 digit number for id and password must be at least 6 digits long and must contain one uppercase letter and one number)** | **UIE,VL** |
|  | **event-3** | **If validation is successful-**  **then the verification process will start.**  **If verification is unsuccessful then an error message will be displayed.** | **VR** |
|  | **event-4** | **If verification is successful then the dashboard of the verified user will be show on a new stage and the login stage will be closed.** | **DP,OP** |
|  | | |  |

| **Process-2: SignOut** | | |  |
| --- | --- | --- | --- |
|  |  | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A signout button will be present on the dashboard of the logged in user. Clicking the button will close the dashboard stage and reopen the login stage.** | **UIE** |

| **Process-3: Give Attendance** | | |  |
| --- | --- | --- | --- |
|  |  | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **Upon logging in, A dashboard will be shown containing a variety of options including a button to give attendance. Which can be clicked to be selected.** | **OP,UIE** |
|  | **event-3** | **Clicking the button will bring up a new scene with a button to confirm attendance.** | **UIE** |
|  | **event-4** | **Clicking the confirm button will record the attendance.** | **UIE,UID,DP** |
|  |  | **User will then be able to sign out.** | **UIE** |

| **Process-4: Apply for leave** | | |  |
| --- | --- | --- | --- |
|  |  | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** |  |
|  | **event-2** | **Upon logging in, A dashboard will be shown containing a variety of options including a button to apply for leave. Which can be clicked to be selected.** | **OP** |
|  | **event-3** | **Clicking the button will bring up a new scene with text fields asking for all relevant information such as leave reason, leave period, paid or unpaid etc. The scene will also contain a submit request button.** | **UIE** |
|  | **event-4** | **If all the field requirements are satisfied, upon clicking the submit button the request will be sent over to the HR manager for approval.** | **UIE,UID,DP,PC** |
|  | **event-5** | **User will then be able to sign out.** | **UIE** |

| **User1 : Engineer** | | |  |
| --- | --- | --- | --- |
| **User-1, Goal-1** | **Description of Goal-1: Engineer will be able to manage generators of the powerplant (turn them on or off)** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to manage turbines. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **A new scene will appear showing the list of all active/inactive generators.** | **DP, OP** |
|  | **event-4** | **A turn on/off button will be present for each turbine which can be selected to achieve the intended outcome (turn on or turn off)** | **UIE** |
|  | **event-5** | **User will then be able to go back to the dashboard or signout** | **UIE** |
|  |  |  |  |
| **User-1, Goal-2** | **Description of Goal-2: Engineer will be able to view live amount of electricity being produced** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view all view live amount of electricity being produced** | **UIE,OP** |
|  | **event-3** | **A new scene will appear which will show the calculations of the electricity being produced.** | **DP,OP** |
|  | **event-4** | **User will then be able to go back to the dashboard or signout** | **UIE** |
|  |  |  |  |
| **User-1, Goal-3** | **Description of Goal-3: Engineer will be able to flag out of order equipments.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view the condition of equipments. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **A new scene will appear showing a list of all active equipments** | **DP, OP** |
|  | **event - 4** | **User will be able to select a certain equipment. A confirm button will be present, which upon clicking will flag the equipment as out of order.** | **UIE,UID** |
|  | **event-5** | **User will then be able to go back to the dashboard or signout** | **UIE** |
|  | | |  |
| **User-1, Goal-4** | **Description of Goal-4: Engineer will be able to confirm the repair of out of order equipments.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in..** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view all out of order equipments. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **A new scene will appear showing all the out of order equipments along with a button to repair it.** | **OP,DP** |
|  | **event-4** | **Clicking the repair button will restore the equipment and thus will be removed from the list.** | **UIE** |
|  | **event-5** | **User will then be able to go back to the dashboard or signout** | **UIE** |
|  | | |  |
| **User-1, Goal-5** | **Description of Goal-5:** **Engineer will be able to apply for the request of purchase of new equipment.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view the condition of equipments. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **A new scene will appear showing a list of essential equipments can be requested to be bought along with a button to request it.** | **OP** |
|  | **event-4** | **Clicking the button will submit a request for purchase of selected button and a notification will be sent over to the finance manager for approval.** | **UIE,UID,DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or signout** | **UIE** |
|  | | |  |
| **User-1, Goal-6** | **Description of Goal-6:** **Engineer will be able view power distribution bar chart** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view power distribution bar chart of generators.** | **UIE,OP** |
|  | **event-3** | **A new scene will appear which will show the power distribution bar chart among al active generators.** | **OP,DP** |
|  |  |  |  |
|  | **event-5** | U**ser will then be able to go back to the dashboard or signout** | **UIE** |
|  | | |  |
| **User-1, Goal-7** | **Description of Goal-7:** **Engineer will be able to view equipment repair history.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view the equipment repair history. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **A new scene will appear showing a list of all the available equipments with a button to select a certain equipment to check the history of.** | **OP,DP** |
|  | **event-4** | **Clicking the button will show further details.** | **UIE,DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-1, Goal-8** | **Description of Goal-8:** **Engineer will be able to respond to customer service requests.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view all customer power outage/repair requests. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **A new scene will appear showing all the repair/power outage notification/requests sent by the customer user along with a button to confirm the completion of repair.** | **OP,DP** |
|  | **event-4** | **Clicking the button will confirm the repair/ confirm the response to power outage and remove it from the list.** | **UIE,UID,DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out.** | **UIE** |

| **User-2:** **Human Resource Manager** | | |  |
| --- | --- | --- | --- |
| **User-2, Goal-1** | **Description of Goal-1:** **HRM will be able to approve the enrollment of new employees (new registered employee accounts)** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view all new account sign ups. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **A new scene will appear containing a list of all new signups which have not been approved to be enrolled as an employee yet. Any account from the list can be selected. A button will be present to confirm the enrollment of the selected account.** | **OP,DP** |
|  | **event - 4** | **User will be able to designate a salary amount for the selected user through a text field.** | **UID** |
|  | **event -5** | **Clicking the confirm button will add the selected account to the list of employees.** | **UIE,UID,DP** |
|  | **event-6** | **User will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-2, Goal-2** | **Description of Goal-2:** **HRM will be able view a list of all currently working employees.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view all currently working employees. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear containing a list of all active employees.** | **UIE,OP,DP** |
|  | **event - 4** | **User will then be able to go back to the dashboard or signout** | **UIE** |
|  | | |  |
| **User-2, Goal-3** | **Description of Goal-3:** **HRM will be able to view active employee contracts (position, salary)** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view all currently working employees, their position and salaries.. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear containing the list of all active employees, from which any employee can be selected. A button will also be present to confirm the selection.** | **OP, DP** |
|  | **event-4** | **Clicking the button will show the selected employees’ position and salary.** | **UIE, DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-2, Goal-4** | **Description of Goal-4:** **HRM will be able to approve/deny leaves.** | |  |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to approve or deny leaves of currently working employees. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Upon clicking the button a new scene will appear showing a list of all unattended leave requests sent in by the employees. The requests will be selectable.** | **UIE,OP,DP** |
|  | **event -4** | **Upon selection, all relevant information such as reason, date period, name, position etc. of the selected employee will be shown in detail. An approve button will be present.** | **UIE,DP,OP** |
|  | **event-5** | **Upon clicking the approve button with the request selected, the leave will be approved and thus removed from the list.** | **UIE,DP** |
|  | **event-6** | **Upon clicking the approve button with the request selected, the leave will be approved and thus removed from the list.** | **DP,UIE** |
|  | **event -7** | **User will then be able to go back to the dashboard or signout** | **UIE** |
|  | | |  |
| **User-2, Goal-5** | **Description of Goal-5:** **HRM will be able to promote employees/increase salary.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view all currently working employees' contracts. Which can be clicked to be selected. The user will be able to change their salaries** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear which will show all active employee names. Any certain employee can be selected. A button will be present to select it.** | **UIE,OP,DP** |
|  | **event - 4** | **Clicking the button will show the selected employees’ current salary with a textfield to update it and also a button to confirm the change.** | **UIE, UID, OP, DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out** | **UIE** |
|  | | |  |
| **User-2, Goal-6** | **Description of Goal-6:** **HRM will be able to leave performance reviews of employee as comments.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view a list of all currently working employees.An employee can be selected from the list using a given button.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will show all previous comments left for the specific employee with another text field to add new comments to the preexisting one. A button will also be present to confirm the new comment.** | **UIE,OP,DP** |
|  | **event-4** | **Clicking the confirm button will add the new comment to the previous one.** | **UID,DP,UIE** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-2, Goal-7** | **Description of Goal-7:** **HRM will be able to fire employees. (Remove them from the employee list)** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view a list of all currently working employees , An employee can be selected and fired from the list using a given button.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear. A selectable list of all currently working employees will be shown with a button to confirm the selection.** | **OP,DP** |
|  | **event-4** | **Confirming the selection will remove the selected employee from the active employee list.** | **UIE,DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out** | **UIE** |
|  | | |  |
| **User-2, Goal-8** | **Description of Goal-8:** **HRM will be able to view employee attendance sheet.** | |  |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view the employee attendance sheet. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear with a list of all employees along with a button to confirm a selection of a single employee.** | **OP,DP** |
|  | **event -4** | **Upon confirmation of the selection using the button, the attendance sheet of the selected employee will be shown,** | **UIE,OP,DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or signout** | **UIE** |

| **User-3 name:** **Customer** | | |  |
| --- | --- | --- | --- |
| **User-3, Goal-1** | **Description of Goal-1:** **Customers will be able to buy energy.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to Buy Energy Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear which will contain a Text field which will display the Available power in the plant . Also there will be a Text field where users can input how much energy they want to Buy and a Confirm button to send the buy request to pay bill section.** | **UID,UIE,OP,DP** |
|  | **event-4** | **Upon Entering the Desired amount on the buy energy Text Field, the price will be calculated and Displayed in a new label .Hitting the Confirm Button will send the Request to pay bill section containing the amount.** | **UIE,UID,DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-3, Goal-2** | **Description of Goal-2:** **Customer will be able to pay bill of the bought energy.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to Pay bill.Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear, a check will be done to see if any bill payment requests have been sent over from the buy energy section.** | **UIE,PC** |
|  | **event-4** | **If there are any pay bill requests, a new scene will appear which will have a text field with the amount that needs to be paid.There will be a confirm button which can be clicked to pay the bill.** | **UIE,UID,DP,OP** |
|  | **event-5** | **Upon clicking the confirm button the bill will be paid.** | **UIE,DP** |
|  | **event-6** | **User will then be able to go back to the dashboard or sign out** | **UIE** |
|  | | |  |
| **User-3, Goal-3** | **Description of Goal-3:** **Customer will be able to request services (report power outage, request repair)** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to Request Services.Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear which will contain buttons to Report for power Outage and Repair Request.** | **UIE,OP** |
|  | **event-4** | **upon clicking the Buttons for power outage/Repair Request, a request will be sent to the Engineer** | **UID,DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or signout** | **UIE** |
|  | | |  |
| **User-3, Goal-4** | **Description of Goal-4:** **Customer will be able to view unpaid amount.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to View unpaid amount.Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the Button will Make a new Scene appear which will contain a list of all the unpaid amount of the company. Selecting a certain payment will show relevant information such as amount of energy bought, the price it was bought at etc.** | **UIE,UID,DP,OP** |
|  | **event-4** | **User will then be able to go back to the dashboard or sign out** | **UIE** |
|  | | |  |
| **User-3, Goal-5** | **Description of Goal-5:** **Customer will be able to get a graphic view of graphs and charts of energy and connections.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view graphs and charts of energy and connections** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear which will show the energy bar chart and connection pie chart.** | **UID,OP,DP** |
|  | **event-4** | **User will then be able to go back to the dashboard or sign out** | **UIE** |
|  | | |  |
| **User-3, Goal-6** | **Description of Goal-6:** **Customer will be able to view all customer service request history.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to View Customer Service History.Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear which will Contain a list of all the services that have been responded to by the power company.** | **UIE,UID,DP,OP** |
|  | **event-4** | **User will then be able to go back to the dashboard or sign out.** | **UIE** |
|  |  |  |  |
| **User-3, Goal-7** | **Description of Goal-7:** **Customer will be able to request for new connection.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to request for a new connection.Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear which will Contain several text fields for submitting relevant info such as Company Name, Address, Contact No.**  **A Confirm button will be there to finalize and submit the connection request.** | **UIE,UID** |
|  | **event-4** | **Upon Clicking the Confirm button,will check if all the fields are fulfilled. If the prerequisite check is successful, the Data from the Text fields will be recorded and the request will be sent.** | **UIE,UID,DP,PC** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-3, Goal-8** | **Description of Goal-8:** **Customer will be able to view a list of all connections.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | UIE |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to View all the available Connections.Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear which will have a text field containing a list of all the active connections that the user has. They will be selectable.** | **UIE,OP,DP** |
|  | **event-4** | **Upon selection all the relevant information regarding the selected connection will be shown. (connection plant name, address etc)** | **UIE,OP,DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out** | **UIE** |

| **User-4 name:** **Finance Manager** | | |  |
| --- | --- | --- | --- |
| **User-4, Goal-1** | **Description of Goal-1:** **User will be able to check the total monetary inflow to the company.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to check total monetary Inflow.Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the Button will make a new scene appear containing a list of all the bill payments done by all customers. The sum of all of these payments will also be calculated to show the total inflow.** | **UIE,OP,DP** |
|  | **event-4** | **User will then be able to go back to the dashboard or sign out** | **UIE** |
|  |  |  |  |
| **User-4, Goal-2** | **Description of Goal-2:** **User will be able to check total paid expenses. (salary, equipment purchase)** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to check total expenses paid.Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the Button will make a new scene appear which will contain a list of all the expenses paid such as salary payments, equipment purchases.**  **Individual list items will be selectable.** | **UIE,OP,DP** |
|  | **event- 4** | **Upon selection of an item, all the relevant information regarding the specific outflow will be shown.** | **UIE,OP,DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out** | **UIE** |
|  | | |  |
| **User-4, Goal-3** | **Description of Goal-3:** **User will be able to check and pay total dues. (rent, utilities)** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view and pay all total dues. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear containing a list of all the unpaid dues, with a checkbox present beside every item and also a pay due button.** | **UIE,OP,DP** |
|  | **event-4** | **User will be able to select the specific dues that he wants to pay the dues of by utilizing the checkbox. After selection, clicking the pay button will confirm the payment.** | **UIE,DP** |
|  | **event-5** | **User will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-4, Goal-4** | **Description of Goal-4: User will be able to approve salary payout.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event - 2** | **A dashboard will be shown containing a variety of options including a button to view and approve salary payout. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-2** | **Upon clicking the Button will make a new scene appear which will show a list of all the employees whose salaries have not been paid yet along with the amount. Each list item will have a checkbox, and there will also be a confirm button which will approve the salary payout.** | **UIE,OP,DP** |
|  | **event-3** | **Hitting the confirm Button will approve the salary payout of the selected employees.** | **UID,DP** |
|  | **event-4** | **User will then be able to go back to the dashboard or sign out** | **UIE** |
|  |  |  |  |
| **User-4, Goal-5** | **Description of Goal-5:** **User will be able to view total payment history. (equipment purchase, salary payout, bill payment)** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view total payment history. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear containing a list of all payments made. (equipment purchase, salary payout, bill payment) . The list will also contain the monetary amount of the payment.** | **UIE,OP,DP** |
|  | **event-4** | **User will then be able to go back to the dashboard or sign out** | **UIE** |
|  |  |  |  |
| **User-4, Goal-6** | **Description of Goal-6:** **User will be able to approve equipment purchase requests.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  |  | **A dashboard will be shown containing a variety of options including a button to view equipment purchase requests. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-2** | **Clicking the Button will make a new scene appear which will show a list of all equipment purchase request that have been Sent by the Engineer and respective prices and a Button to Confirm The purchase.** | **UIE,OP,DP** |
|  | **event-3** | **Clicking The confirm button will approve the bill payment and make the equipment available to the engineer.** | **UID,UIE,DP** |
|  | **event-4** | **User will then be able to go back to the dashboard or sign out** | **UIE** |
|  | | |  |
| **User-4, Goal-7** | **Description of Goal-7:** **User will be able to view income statements.** | | **Event Type** |
| **Workflow:** | **event-1** | **User will follow the login workflow to sign in.** | **UIE** |
|  |  | **A dashboard will be shown containing a variety of options including a button to view income statement. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-2** | **Clicking the Button will make a new scene appear which will show all the transactions made such as bill paid,salaries paid, cash inflow etc. and all the data will be calculated to find out the total income which will also be shown.c** | **UIE,OP,DP** |
|  | **event-3** | **User will then be able to go back to the dashboard or sign out.** | **UIE** |
|  |  |  |  |
| **User-4, Goal-8** | **Description of Goal-8:** **User will be able to view total available liquid assets.** | | **Event Type** |
| **Workflow:** | **event-1** | **Users will follow the login workflow to sign in.** | **UIE** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a button to view total available liquid cash. Which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **Clicking the button will make a new scene appear which will show the total amount of liquid cash available. The figure will be calculated using the data from the income statement, customer bill payments etc.** | **UIE,OP,DP** |
|  | **event-4** | **User will then be able to go back to the dashboard or sign out** | **UIE** |

| **User-5 name:** **Procurement and Supply Chain** | | | Event Type |
| --- | --- | --- | --- |
| **User-5, Goal-1** | **Description of Goal-1:** **Vendor Selection and Evaluation: Research and evaluate potential vendors for equipment, materials, and services.** | |  |
| Workflow: | event-1 | **Display vendor selection criteria** | **UIE** |
|  | event-2 | **User selects a potential vendor** | **UID** |
|  | event-3 | **Display evaluation results for the selected vendor** | **OP** |
|  | … | **…….** |  |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-5, Goal-2** | **Description of Goal-2:** **Contract Negotiation: Negotiate favorable terms and pricing with suppliers, involving legal and finance teams.** | |  |
| Workflow: | event-1 | **Request negotiation terms and pricing** | **UIE** |
|  | event-2 | **User provides negotiation terms and pricing** | **UID** |
|  | event-3 | **Check if negotiation terms are within acceptable ranges** | **PC** |
|  | event-4 | **Verify the negotiation terms and pricing** | **VR** |
|  | event-5 | **Display finalized contract details** | **OP** |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-5, Goal-3** | **Description of Goal-3:** **Inventory Management: Implement systems to optimize stock levels of critical parts and materials.** | |  |
| Workflow: | event-1 | **Fetch current stock levels from the inventory system** | **DP** |
|  | event-2 | **Display current stock levels** | **OP** |
|  | event-3 | **User specifies optimal stock levels** | **UID** |
|  | event-4 | **Process optimal stock levels and update the inventory system** | **DP** |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-5, Goal-4** | **Description of Goal-4:** **Supply Chain Optimization: Analyze and improve supply chain efficiency, including logistics and warehousing.** | |  |
| Workflow: | event-1 | **Analyze supply chain data to identify inefficiencies** | **DP** |
|  | event-2 | **Display supply chain analysis results** | **OP** |
|  | event-3 | **User selects areas for improvement** | **UID** |
|  | event-4 | **Implement changes in logistics and warehousing based on user selection** | **DP** |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-5, Goal-5** | **Description of Goal-5:** **Risk Assessment and Mitigation: Identify and develop contingency plans for potential supply chain risks.** | |  |
| Workflow: | event-1 | **Identify potential supply chain risks based on historical data** | **DP** |
|  | event-2 | **Display identified risks** | **OP** |
|  | event-3 | **User develops contingency plans for identified risks** | **UID** |
|  | event-4 | **Process contingency plans and update the risk mitigation strategy** | **DP** |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-5, Goal-6** | **Description of Goal-6:** **Supplier Relationship Management: Build and maintain strong relationships with suppliers.** | |  |
| Workflow: | event-1 | **User inputs supplier information** | **UID** |
|  | event-2 | **Validate supplier information** | **VL** |
|  | event-3 | **Display supplier relationship details** | **OP** |
|  | event-4 | **User updates supplier relationship details** | **UID** |
|  | event-5 | **Process and store updated supplier information** | **DP** |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-5, Goal-7** | **Description of Goal-7:** **Cost Analysis and Savings Initiatives: Analyze costs and implement initiatives to reduce expenses.** | |  |
| Workflow: | event-1 | **Analyze procurement costs and savings opportunities** | **DP** |
|  | event-2 | **Display cost analysis results** | **OP** |
|  | event-3 | **User selects cost-saving initiatives to implement** | **UID** |
|  | event-4 | **Implement chosen cost-saving initiatives** | **DP** |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-5, Goal-8** | **Description of Goal-8:** **Sustainable Procurement Practices: Promote environmentally and socially responsible procurement.** | |  |
| Workflow: | event-1 | **Display sustainable procurement guidelines** | **UIE** |
|  | event-2 | **User selects environmentally and socially responsible procurement practices** | **UID** |
|  | event-3 | **Display selected sustainable procurement practices** | **OP** |
|  | … | **…….** |  |
|  | event-**n** | **…….** |  |

| **User-6 name:** **Research and Development** | | | Event type |
| --- | --- | --- | --- |
| **User-6, Goal-1** | **Description of Goal-1:** **Technology Assessment: Research emerging technologies for operational enhancements.** | |  |
| Workflow: | event-1 | **Display technology assessment criteria** | **UIE** |
|  | event-2 | **Display a list of emerging technologies** | **OP** |
|  | event-3 | **User selects a technology for assessment** | **UID** |
|  | event-4 | **Display assessment results for the selected technology** | **OP** |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-6, Goal-2** | **Description of Goal-2:** **Feasibility Studies: Assess the viability and benefits of adopting new technologies.** | |  |
| Workflow: | event-1 | **Request project details for feasibility study** | **UIE** |
|  | event-2 | **User provides project details** | **UID** |
|  | event-3 | **Check if the project meets feasibility criteria** | **PC** |
|  | event-4 | **Display feasibility study results and benefits** | **OP** |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-6, Goal-3** | **Description of Goal-3:** **Prototype Development: Collaborate to design and test new equipment or processes.** | |  |
| Workflow: | event-1 | **Request prototype design specifications** | **UIE** |
|  | event-2 | **User provides design specifications** | **UID** |
|  | event-3 | **Process design specifications to create a prototype** | **DP** |
|  | event-4 | **Display the created prototype for testing** | **OP** |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-6, Goal-4** | **Description of Goal-4:** **Data Analysis: Analyze research data for process improvement opportunities.** | |  |
| Workflow: | event-1 | **Analyze research data for process improvement opportunities** | **DP** |
|  | event-2 | **Display analysis results** | **OP** |
|  | event-3 | **User selects potential process improvements** | **UID** |
|  | event-4 | **Implement chosen process improvements** | **DP** |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-6, Goal-5** | **Description of Goal-5:** **Intellectual Property Management: Protect intellectual property through patents and trade secrets.** | |  |
| Workflow: | event-1 | **Display intellectual property protection options** | **UIE** |
|  | event-2 | **User selects intellectual property protection methods** | **UID** |
|  | event-3 | **Display protected intellectual property details(e.g., patents, trade secrets)** | **OP** |
|  | … | **…….** |  |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-6, Goal-6** | **Description of Goal-6:** **Collaboration and Partnerships: Foster collaborations with external organizations for joint research.** | |  |
| Workflow: | event-1 | **Display collaboration opportunities with external organizations** | **UIE** |
|  | event-2 | **User selects collaboration options** | **UID** |
|  | event-3 | **Display details of the established collaborations** | **OP** |
|  | … | **…….** |  |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-6, Goal-7** | **Description of Goal-7:** **Regulatory Compliance and Standards: Stay updated and comply with industry regulations.** | |  |
| Workflow: | event-1 | **Display industry regulations and standards** | **UIE** |
|  | event-2 | **Display the current regulatory landscape** | **OP** |
|  | event-3 | **Check if the research complies with industry regulations and standards** | **PC** |
|  | … | **…….** |  |
|  | event-**n** | **…….** |  |
|  | | |  |
| **User-6, Goal-8** | **Description of Goal-8:** **Research Funding and Grant Applications: Pursue funding opportunities for innovation projects.** | |  |
| Workflow: | event-1 | **Display funding opportunities for innovation projects** | **UIE** |
|  | event-2 | **User selects funding options to pursue** | **UID** |
|  | event-3 | **Display grant application details** | **OP** |
|  | event-4 | **User provides required information for grant application** | **UID** |
|  | event-5 | **Process grant application and submit it for funding consideration** | **DP** |
|  | event-**n** | **…….** |  |

| **User7: Environmental Compliance Officer (ECO)** | | |  |
| --- | --- | --- | --- |
| **User-7, Goal-1** | **Description of Goal-1: ECO creates a Text File with Emission Data to Monitor Pollution Levels** | | **Event Type** |
| **Workflow:** | **event-1** | **ECO will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar to input Emission Data. Which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Text Field with** **power Plant, pollutant, emissions,**  **Date that are inputted from an actual file.** | **DP, OP** |
|  | **event-4** | **ECO will be then press a save button and this will be saved as text in folder.** | **UIE, UID** |
|  | **event-5** | **ECO will then be able to go back to the dashboard when the click out** | **UIE** |
|  |  |  |  |
| **User-7, Goal-2** | **Description of Goal-2: ECO creates a BIN File with Operation Performance Data to Monitor Energy Consumption** | | **Event Type** |
| **Workflow:** | **event-1** | **ECO will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar to input Operation Performance Data. Which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Text Field with Plant Id, Power Output, Fuel Consumption, Efficiency Rate, Operating Temperature, Emission Levels, Noise Levels, Equipment Running Hours, date**  **Date that are inputted to a bin file.** | **DP, OP** |
|  | **event-4** | **ECO will be then press a save button and this will be saved as text in folder.** | **UIE, UID** |
|  | **event-5** | **ECO will then be able to go back to the dashboard when the click out** | **UIE** |
|  |  |  |  |
| **User-7, Goal-3** | **Description of Goal-3: ECO creates a bin File with Relevant Regulations** | | **Event Type** |
| **Workflow:** | **event-1** | **ECO will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar to input Relevant Regulations Input. Which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Text Field with Regulation ID, Regulation Title, Regulation Text,**  **Date Added, Compliance Status (Compliant/Non-compliant), Last Updated Date that are inputted from bin file.** | **OP** |
|  | **event - 4** | **ECO will be then press a save button and this will be saved as text in folder.** | **UIE, UID** |
|  | **event-5** | **ECO will then be able to go back to the dashboard when the click out** | **UIE** |
|  | | |  |
| **User-7, Goal-4** | **Description of Goal-4: ECO creates a Text File with** **Track Waste Management and Record waste disposal data in a text file.** | | **Event Type** |
| **Workflow:** | **event-1** | **ECO will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar to input Relevant Regulations Input. Which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Text Field with Date of Disposal, Waste Type, Quantity, Location of Disposal, Disposer's Name/ID, Disposal Documentation, Regulatory Compliance and**  **this will be input to a text file.** | **OP** |
|  | **event-4** | **ECO will be then press a save button and this will be saved as text in folder.** | **UIE, UID** |
|  | **event-5** | **ECO will then be able to go back to the dashboard when the click out** | **UIE** |
|  | | |  |
| **User-7, Goal-5** | **Description of Goal-5:** **ECO will be able generate Pie chart to illustrate different waste types and quantities from Track Waste Management** | | **Event Type** |
| **Workflow:** | **event-1** | **ECO will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar to generate Pie chart for** **Track Waste Management which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing pie chart when load pie chart appears and clicked.** | **OP, UID, DP** |
|  | **event-4** | **ECO will then be able to go back to the dashboard when the click out.** | **UIE** |
|  | | |  |
| **User-7, Goal-6** | **Description of Goal-6:** **ECO will be able generate Table view to show all the emission data in emission text and track them/ reference.** | | **Event Type** |
| **Workflow:** | **event-1** | **ECO will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar to generate Table view for** **Emission Data which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Table View of emission data and see what was inputted before for reference.** | **OP, UID, DP** |
|  | **event-5** | **ECO will then be able to go back to the dashboard when the click out.** | **UIE** |
|  | | |  |
| **User-7, Goal-7** | **Description of Goal-7:** **ECO will be able generate Table view to show all Operation performance data from operation performance bin file and track them/ reference.** | | **Event Type** |
| **Workflow:** | **event-1** | **ECO will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar to generate Table view for** **Operation Performance which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Table View of Operation Performance and see what was inputted before for reference.** | **OP, UID, DP** |
|  | **event-5** | **ECO will then be able to go back to the dashboard when the click out.** | **UIE** |
|  | | |  |
| **User-7, Goal-8** | **Description of Goal-8:** **ECO will be able generate Line chart to show water usage data from water usage bin file and track them/ reference.** | | **Event Type** |
| **Workflow:** | **event-1** | **ECO will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar to generate input water usage for** **Water usage which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **A new scene will appear showing Text Field for water usage**  **this will be input to a bin file.** | **OP** |
|  | **event-4** | **ECO will be then press a save button and this will be saved as text in folder.** | **UIE, UID** |
|  | **event-5** | **ECO will then be able to go back to the dashboard when the click out** | **UIE** |
|  | **event-6** | **A dashboard will be shown containing a variety of options including a menu bar to generate line chart for** **Water usage which can be clicked to be selected.** | **UIE,OP** |
|  | **event-7** | **A new scene will appear showing Table View of Operation Performance and see what was inputted before for reference.** | **OP, UID, DP** |
|  | **event-8** | **ECO will then be able to go back to the dashboard when the click out** | **UIE** |
|  |  |  |  |
|  |  |  |  |

| **User-8:** **Data Analyst (DA)** | | |  |
| --- | --- | --- | --- |
| **User-8, Goal-1** | **Description of Goal-1:** **Data Analysts can input type of fuel, its associated cost, and the date of entry to analyze fuel expenses effectively** | | **Event Type** |
| **Workflow:** | **event-1** | **Data Analyst will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar where input Fuel Cost and Usage Tracking which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Text Field with type of fuel, associated cost, and the date of entry**  **Can be inputted to BIN file.** | **OP** |
|  | **event - 4** | **DA will be then press a save button and this will be saved as BIN in folder.** | **UIE, UID** |
|  | **event-5** | **DA will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-8, Goal-2** | **Description of Goal-2:** **Data Analysts can input Operational Trend Analysis predict potential issues** | | **Event Type** |
| **Workflow:** | **event-1** | **Data Analyst will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar where input Operational Trend Analysis which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Text Field with type of Equipment ID, Date, Power Output (MW), Efficiency (%), Fuel Consumption (Tons), Downtime Duration (Hours), Error Count**  **Can be inputted to text file.** | **OP** |
|  | **event - 4** | **DA will be then press a save button and this will be saved as text in folder.** | **UIE, UID** |
|  | **event-5** | **DA will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-8, Goal-3** | **Description of Goal-3: Data Analysts can input Maintenance Log Management to reduce downtime and which employee solves which problem efficiently.** | | **Event Type** |
| **Workflow:** | **event-1** | **Data Analyst will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar where input Maintenance Log Management which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Text Field with type of Maintenance ID, Equipment ID, Date, Type of Maintenance (preventive, corrective, predictive), Technicians Involved, Duration (Hours), Description, Spare Parts Used**  **Can be inputted to text file.** | **OP** |
|  | **event-4** | **DA will be then press a save button and this will be saved as text in folder.** | **UIE, UID** |
|  | **event-5** | **DA will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-8, Goal-4** | **Description of Goal-4: Data Analysts can input Equipment Repairs and Replacements to associated costs for components and equipment when equipment failure occurs.** | |  |
| **Workflow:** | **event-1** | **Data Analyst will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar where input Equipment Repairs and Replacements which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Text Field with type of Repair/Replacement ID, Equipment ID, Date Type of Work, Component Replaced, Technician/Service Provider, Cost (USD), Duration (Hours), Description Used**  **Can be inputted to text file.** | **OP** |
|  | **event -4** | **DA will be then press a save button and this will be saved as text in folder.** | **UIE, UID** |
|  | **event-5** | **DA will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-8, Goal-5** | **Description of Goal-5:** **Data Analysts can generate Table view for Operational Trend Analysis of fuel, its associated cost, and the date of entry to analyze fuel expenses effectively** | | **Event Type** |
| **Workflow:** | **event-1** | **Data Analyst will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar where generate bar chart Fuel Cost and Usage Tracking which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing Table view of Fuel Cost and Usage Tracking and see what was inputted before for reference.** | **UIE ,OP, DP** |
|  | **event - 4** | **DA will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-8, Goal-6** | **Description of Goal-6:** **Data Analysts can generate line chart Operational Trend Analysis to find which equipment is problematic** | | **Event Type** |
| **Workflow:** | **event-1** | **Data Analyst will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar where generate line chart Operational Trend Analysis which can be clicked to be selected. Error count and equipment.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing line Chart of equipment and downtime** | **UIE, OP, DP** |
|  | **event-4** | **DA will then be able to go back to the dashboard or sign out.** | **UIE** |
|  | | |  |
| **User-8, Goal-7** | **Description of Goal-7:** **Data Analysts can generate line chart Maintenance Log Management to find which employee to send to which equipment** | | **Event Type** |
| **Workflow:** | **event-1** | **Data Analyst will follow the login workflow to sign in.** | **VL, VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar where generate line chart Maintenance Log Management which can be clicked to be selected.** | **UIE, OP** |
|  | **event-3** | **A new scene will appear showing bar Chart of equipment and employee** | **UIE, OP, DP** |
|  | **event-5** | **DA will then be able to go back to the dashboard or sign out** | **UIE** |
|  | | |  |
| **User-8, Goal-8** | **Description of Goal-8:** **Data Analysts can generate pie chart Equipment Repairs and Replacements to find which equipment is taking up most repair money** | |  |
| **Workflow:** | **event-1** | **DA will follow the login workflow to sign in.** | **VL,VR** |
|  | **event-2** | **A dashboard will be shown containing a variety of options including a menu bar where generate bar chart Equipment Repairs and Replacements which can be clicked to be selected.** | **UIE,OP** |
|  | **event-3** | **A new scene will appear showing piechart equipment and cost of repair.** | **OP,DP,UIE** |
|  | **event-5** | **DA will then be able to go back to the dashboard or signout** | **UIE** |