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| **System Name: HestiService system** | | | | | |
| **Author:** Anke Brits | **Date:** 21 July 2024 | | | **Version:** 1.0.0 | |
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| **Use Case Name:** | Generate preliminary quote | | **Use Case Type** | | |
| **Use Case ID:** | 4.8 | | Business Requirements: ◻ | | |
| **Priority:** | High | | System Analysis: ◻ | | |
| **Source:** | Client study (Hestico) | | System Design: ☒ | | |
| **Primary Business Actor (PBA):** | Admin | | | | |
| **Primary System Actor (PSA):** | None | | | | |
| **Other Participating Actors:** | None | | | | |
| **Other Interested Stakeholders:** | None | | | | |
| **Description:** | This use case describes the process of the admin creating a preliminary quote.  The admin navigates to the quotes page and clicks the “Generate Preliminary Quote” button. The admin is redirected to another page where they are required to fill in the details of the preliminary quote. The admin then submits the information, and a preliminary quote is generated.  The use case concludes when the preliminary quote is successfully generated. | | | | |
| **Pre-condition:** | * The admin must be logged in | | | | |
| **Trigger** | The admin wants to create a preliminary quote. The admin clicks the “Quotes” tab on the navigation bar. | | | | |
| **Typical Course**  **of Events:** | **Actor Action** | **System Response** | | | |
| **Manual Action** | | | **Automated Action** |
| Step 1: The admin wants to create a preliminary quote. The admin clicks the “Quotes” tab on the navigation bar. |  | | | Step 2: The system to the “Quote List” screen which contains the following elements:  A heading with the text “Quotes” at the top of the screen.  A “Generate Preliminary Quote” button.  A table displaying the quotes with the following columns:   * Quote ID * Customer Name * Service Type * Machine Type * Employee Name * Quote Fee * Date * Description * Status * Type * Actions   If there is no invoice associated with the quote and the quote is not a preliminary quote, then a button called “Generate Invoice” will be displayed.  The system displays the quotes by using Entity Framework Core to retrieve only the related data in the Quote table with the following attributes:   * Quote\_Id (PK) * Customer\_Id (FK) * Service\_Type\_Id (FK) * Machine\_Type\_Id (FK) * Employee\_Id (FK) * Quote\_Fee * Date * Description * Quote\_Status\_Id (FK) * Quote\_Type\_Id (FK)   The system links the Quote table to the Customer table using the foreign key Customer\_Id. The Customer table has the following attributes:   * Customer\_Id (PK) * Company\_Name * Email * Phone\_Number   The system links the Quote table to the Service\_Type table using the foreign key Service\_Type\_Id. The Service\_Type table has the following attributes:   * Service\_Type\_Id (PK) * Name * Description   The system links the Quote table to the Machine\_Type table using the foreign key Machine\_Type\_Id. The Machine\_Type table has the following attributes:   * Machine\_Type\_Id (PK) * Name * Description   The system links the Quote table to the Employee table using the foreign key Employee\_Id. The Employee table has the following attributes:   * Employee\_Id (PK) * Name * Surname * Phone\_Number * Email   The system links the Quote table to the Quote\_Status table using the foreign key Quote\_Status\_Id. The Quote\_Status table has the following attributes:   * Quote\_Status\_Id (PK) * Name * Description   The system links the Quote table to the Quote\_Type table using the foreign key Quote\_Type\_Id. The Quote\_Type table has the following attributes:   * Quote\_Type\_Id (PK) * Name * Description   [ALT] |
| Step 3: The admin clicks the “Generate Preliminary Quote” button. |  | | | Step 4: The system redirects the customer to the “Generate Preliminary Quote” screen which contains the following elements:  A heading with the text “Generate Preliminary Quote” at the top of the screen.  A customer dropdown.  A service type dropdown.  A machine type dropdown.  An input field for entering the quote fee. This field accepts a numerical value.  A text area for entering a description of the quote. This field accepts a string value.  An input field for entering the hours. This field accepts a numerical value.  A button labelled “Generate Quote” to submit the form and create the preliminary quote.  A button labelled “Cancel” to terminate the use case.  This dropdown is populated using Entity Framework Core to retrieve data from the Customer table. The Customer table has the following attributes:   * Customer\_Id (PK) * Company\_Name * Account\_No * Date\_of\_Account\_Request * Cell\_Phone\_No * Telephone\_No * Work\_No * Company\_Email\_Address * User\_ID (FK) * Flag\_ID (FK)   The service type dropdown is populated using Entity Framework Core to retrieve data from the Service\_Type table, which has the following attributes:   * Service\_Type\_Id (PK) * Name * Description   The machine type dropdown is populated using Entity Framework Core to retrieve data from the Machine\_Type table, which has the following attributes:   * Machine\_Type\_Id (PK) * Name * Description * Serial\_Number |
| Step 5: The admin completes the relevant information in the respective places. |  | | |  |
|  | Step 6: The admin clicks the “Generate Quote” button. |  | | | Step 7: The system validates the entered information by using Angular form checking to ensure that all required fields are filled and meet the specified criteria:  Customer:   * Required * Must be a valid selection from the dropdown   Service Type:   * Required * Must be a valid selection from the dropdown   Machine Type:   * Required * Must be a valid selection from the dropdown   Quote Fee:   * Required * Must be a valid numerical value   Description:   * Required * Must be a string with a maximum length of 5000 characters   Hours:   * Required * Must be a valid numerical value   [ALT] |
|  |  | | | Step 8: The system saves the quote in the Quote table with the following attributes:   * Quote\_Id (PK) * Customer\_Id (FK) * Service\_Type\_Id (FK) * Quote\_Type\_Id (set to 1 for preliminary quote) * Quote\_Status\_Id (set to 1 for Awaiting approval) * Machine\_Type\_Id (FK) * Discount\_Id (null) * Employee\_Id (null) * Work\_Order\_Id (null) * Date (set to today's date) * Quote\_Fee * Description   The system links the Quote table to the Customer table using the foreign key Customer\_Id. The Customer table has the following attributes:   * Customer\_Id (PK) * Company\_Name * Email * Phone\_Number * Account\_No * Date\_of\_Account\_Request * Cell\_Phone\_No * Telephone\_No * Work\_No * Company\_Email\_Address * User\_ID (FK) * Flag\_ID (FK)   The system links the Quote table to the Service\_Type table using the foreign key Service\_Type\_Id. The Service\_Type table has the following attributes:   * Service\_Type\_Id (PK) * Name * Description   The system links the Quote table to the Machine\_Type table using the foreign key Machine\_Type\_Id. The Machine\_Type table has the following attributes:   * Machine\_Type\_Id (PK) * Name * Description * Serial\_Number   The system links the Quote table to the Quote\_Type table using the foreign key Quote\_Type\_Id. The Quote\_Type table has the following attributes:   * Quote\_Type\_Id (PK) * Name * Description   The system links the Quote table to the Quote\_Status table using the foreign key Quote\_Status\_Id. The Quote\_Status table has the following attributes:   * Quote\_Status\_Id (PK) * Name * Description   The system links the Quote table to the Employee table using the foreign key Employee\_Id. The Employee table has the following attributes:   * Employee\_Id (PK) * Employee\_Type\_Id (FK) * UserId * Name * Surname * Address * Phone\_No * Gender * Race * Preferred\_Name   The system logs the following when quote is generated:   * user performing the operation * Transaction Type: * The description which contains the quote id.   In the following Audit\_Trail entity has the following attributes:   * Audit\_Trail\_Id (PK) * Date\_Time * User\_Name * Transaction\_Type * Description   The Audit\_trail\_Id is automatically incremented.  [ALT] |
|  |  |  | | | Step 9: The system redirects the customer to the “Quote List” screen. |
| **Alternate Courses:** | [ALT] Step 2: There are no records in the Quotes table from the database. The system will display an error message with the text “No items were found” | | | | |
| [ALT] : The system fails to validate because the entered values does not match the specification for each required field. The system will notify the customer that provided information is invalid with popup notification that input information is invalid. Go to step 5 so admin can re input the information. | | | | |
| [ALT] Step 8: The system fails to add the new quote to the database. The system will display a notification. This use case terminates. The admin is redirected to the “Quote List” screen. | | | | |
| **Conclusion:** | A new preliminary quote has successfully been added to the Quote table in the database. | | | | |
| **Post-condition:** | The admin is redirected to the “Quote List” screen. | | | | |
| **Business Rues:** | * Only an admin can create preliminary quotes | | | | |
| **Implementation Constraints and Specifications:** | * None | | | | |
| **Assumptions:** | * None | | | | |
| **Open Issues:** | * None | | | | |