

Lab Assignment 2

Part 1 (7.5 pts)

The design of the Customer Incidents form

The screenshot shows a Windows application window titled "Customer Incidents". At the top, there is a "Customer ID: 1010" label and a "Get Customer" button. Below this, several text boxes are populated with customer information: "Customer ID: 1010", "Name: Kendall Mayte", "Address: PO Box 2069", "City, State, Zip: Fresno CA 93718", "Phone: (559) 555-9999", and "Email: kmayte@mma.fresno.ca.gov". At the bottom, a DataGrid control displays a table of incidents.

| | Product | Date Opened | Date Closed | Title |
|---|---------|-------------|-------------|----------------------------|
| ▶ | LEAG10 | 12/7/2015 | 12/8/2015 | Could not install |
| | TEAM10 | 12/23/2015 | 12/24/2015 | Error launching program |
| | TRNY20 | 12/23/2015 | | Unable to activate product |

Operation

- When this application starts, a blank Customer Incidents form is displayed.
- To retrieve a customer, the user enters a customer ID and clicks the Get Customer button. Then, the customer data for the customer with that ID is displayed in the text boxes and the incidents for that customer are displayed in the DataGrid control. If a customer with the specified ID isn't found, an error message is displayed.

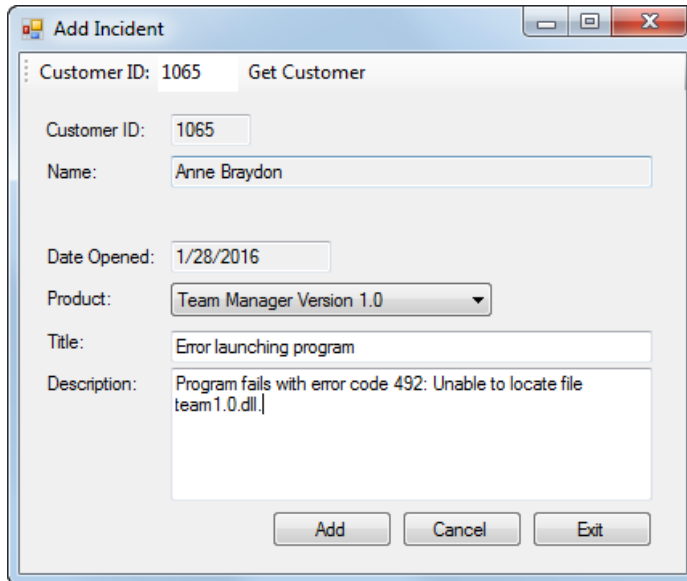
Specifications

- Create a data source with two tables: Customers and Incidents. Include all the columns in the Customers table and all the columns except for TechID and Description in the Incidents table.
- Add a query to the Customers table adapter that retrieves the data for a customer with a specified ID. This query should be used to display the customer data in the text boxes on the form.
- Add a query to the Incidents table adapter that retrieves the incidents for a specified customer. This query should be used to display the incidents in the DataGrid control.
- Use error handling as necessary throughout this application.

Part 2 (7.5 pts)

For this project, you'll create a form that lets the user add incidents for a selected customer. Prerequisites: chapters 1-11, 17-19.

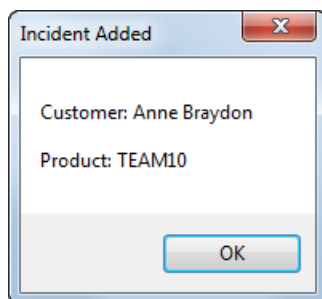
The design of the Add Incident form



The 'Add Incident' dialog box is a standard Windows-style window with a title bar and standard window controls. It contains several input fields and buttons. The 'Customer ID' field is pre-filled with '1065' and has a 'Get Customer' button next to it. Below it, the 'Name' field is pre-filled with 'Anne Braydon'. The 'Date Opened' field is pre-filled with '1/28/2016'. The 'Product' field is a dropdown menu currently showing 'Team Manager Version 1.0'. The 'Title' field is pre-filled with 'Error launching program'. The 'Description' field is a larger text area pre-filled with 'Program fails with error code 492: Unable to locate file team1.0.dll'. At the bottom, there are three buttons: 'Add', 'Cancel', and 'Exit'.

Operation

- When this application starts, a blank Add Incident form is displayed.
- To retrieve a customer, the user enters a customer ID and clicks the Get Customer button. Then, the customer ID and name for that customer are displayed in the first two text boxes. If a customer with the specified ID isn't found, an error message is displayed.
- To add an incident, the user selects a product from the combo box, enters a title and description, and clicks the Add button to add a row to the Incidents table and update the database. If the update is successful, a dialog box like the one that follows is displayed and the form is cleared:



The 'Incident Added' dialog box is a small window with a title bar and a close button. It contains two lines of text: 'Customer: Anne Braydon' and 'Product: TEAM10'. At the bottom, there is an 'OK' button.

- To cancel the addition of an incident, the user clicks the Cancel button and the form is cleared.

Specifications

- Create a data source with three tables: Customers, Incidents, and Products. Include the CustomerID and Name columns in the Customers table, all the columns in the Incidents table except for TechID and DateClosed, and the ProductCode and Name columns in the Products table.

- Add a query to the Customers table adapter that retrieves the data for a customer with a specified ID. This query should be used to display the customer name on the form. (The Customer ID text box will supply the value that's saved in the CustomerID column of a new incident, so it should be bound to the Incidents table.)
- Add a query to the Products table adapter that retrieves the products that are registered to a customer. To do that, you can join the Products table with the Registrations table and return only the rows for the products in the Registrations table for the selected customer. These products should be displayed in the combo box on the Add Incident form. (Be sure to create this query before you bind the combo box or you'll have trouble creating the query.)
- Use the Incidents binding source to add a new, blank row to the Incidents table when a valid customer ID is entered. Then, set the value of the Customer ID text box to that customer ID, and set the value of the Date Opened text box to the current date.
- Enable and disable the controls for adding an incident and for canceling an addition as necessary so these controls are enabled only when a customer has been selected. (These controls should be disabled by default.) In addition, set the ReadOnly property of the Date Opened text box to True so it can't be modified.
- Validate the data on the Add Incident form to be sure that a product is selected and that a title and description are entered.
- Use error handling as necessary throughout this application.

Hints

- If you create the Product combo box from the ProductCode field in the Incidents table, the data source for the query will be set to the Incidents table by default. To add the query to the Products table, you'll need to select that table from the combo box at the top of the Search Criteria Builder dialog box.
- To clear the data from the form after an incident is added, use the RemoveCurrent method of the Customers and Incidents binding sources.
- If you retrieve a customer and then retrieve another customer without adding an incident for the first customer, an error will occur unless you cancel the addition of the incident for the first customer. To test for this situation, you can check the number of rows in the Incidents binding source when the user clicks the Get Customer button and then cancel the addition of the incidents row if the binding source already contains a row.