EY GDS Hackpions 4.0

Theme: Smart Dashboard Editor

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Problem scenario

We want to access the data from the report's dashboard and modify few values directly from the visualization tool.

Tasks

1. Create a common app that will enable a direct editor integrated into the published dashboard on any visualization tools (e.g. Power BI, Tableau, Spotfire, Excel, etc.)
2. The Editor should automate the steps involved in the opening data table in Edit mode.
3. Updates given to the data table should instantly get reflected on the published dashboard.

Generally the reporting tools do not allow modifying data in the source as they are read-only. The write-back function in Power Apps is available to accommodate this. Write-back enables end users to change and update the values in the data source directly from the Power BI report.

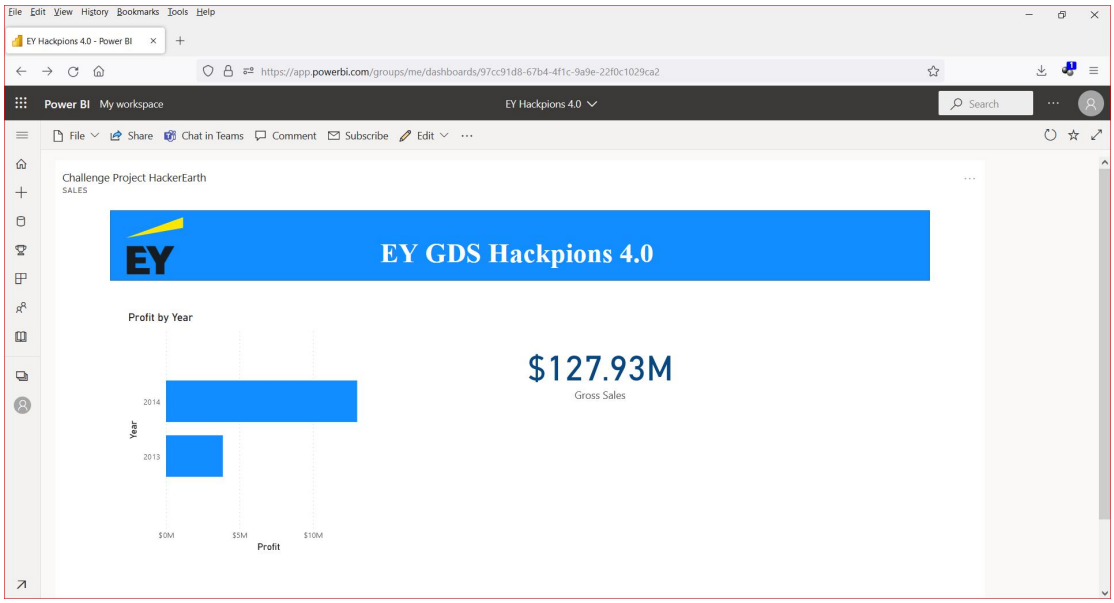
In order to solve this problem, I am going to illustrate the solution by using a SQL Server database as the data source. You can have any data source such as Azure SQL Database, Azure Cosmos DB, SAP HANA Database, Sharepoint List, etc.

Points to remember

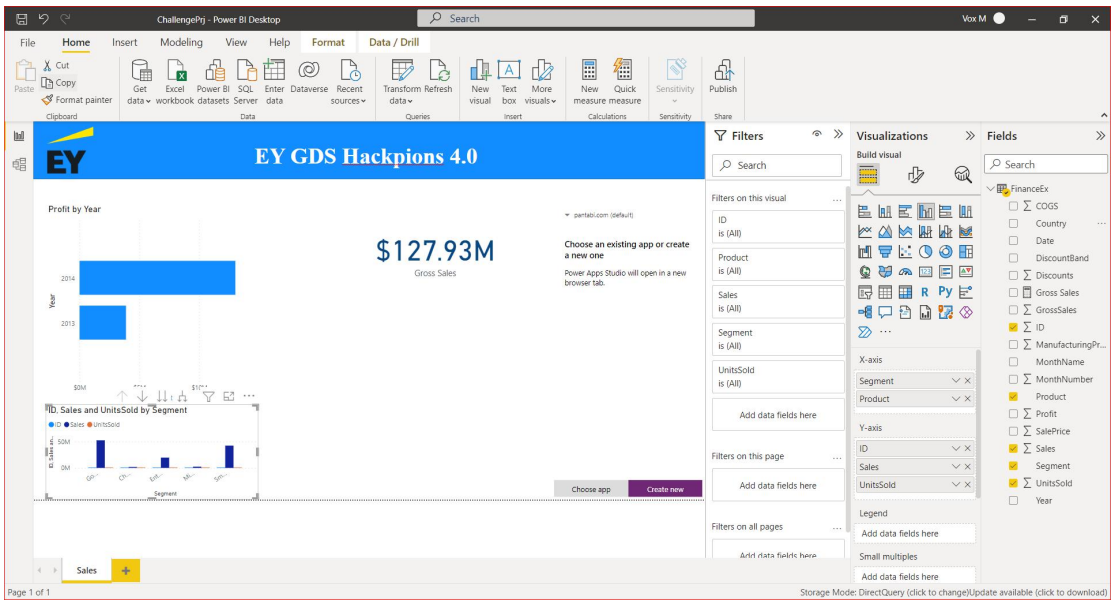
1. A Power Apps license is required.
2. To do write-back, the connection with the data source should be done by DirectQuery mode as the results will be immediately noticed without a hard refresh on the Power BI dataset.
3. The data table must have a primary key field in order to update the selected records and fields with DirectQuery mode.

Steps

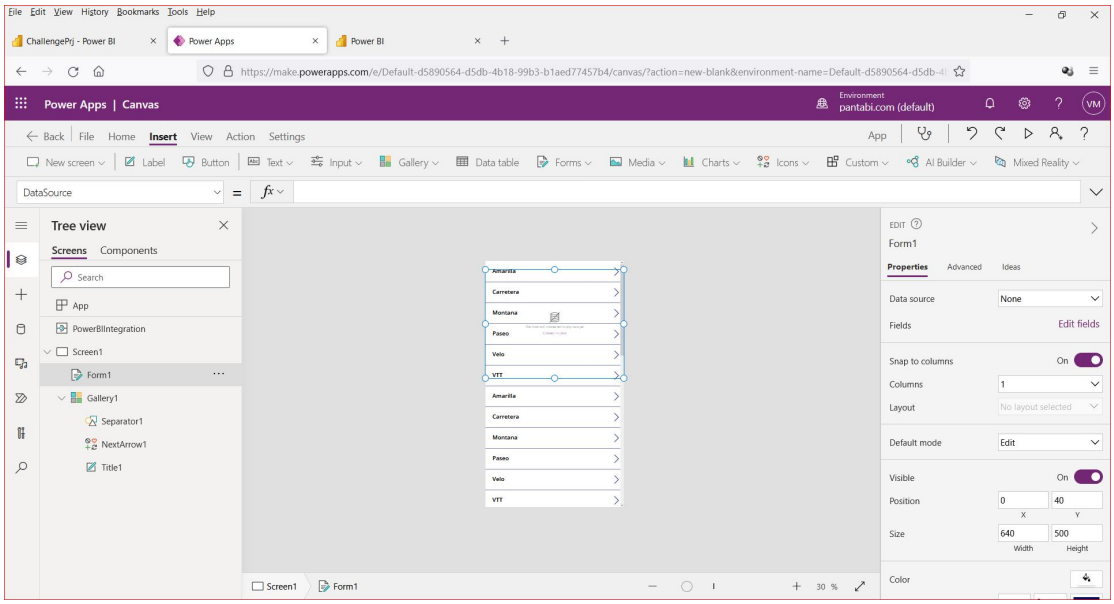
1. Create a sample report in Power BI using the dataset created in the SQL.

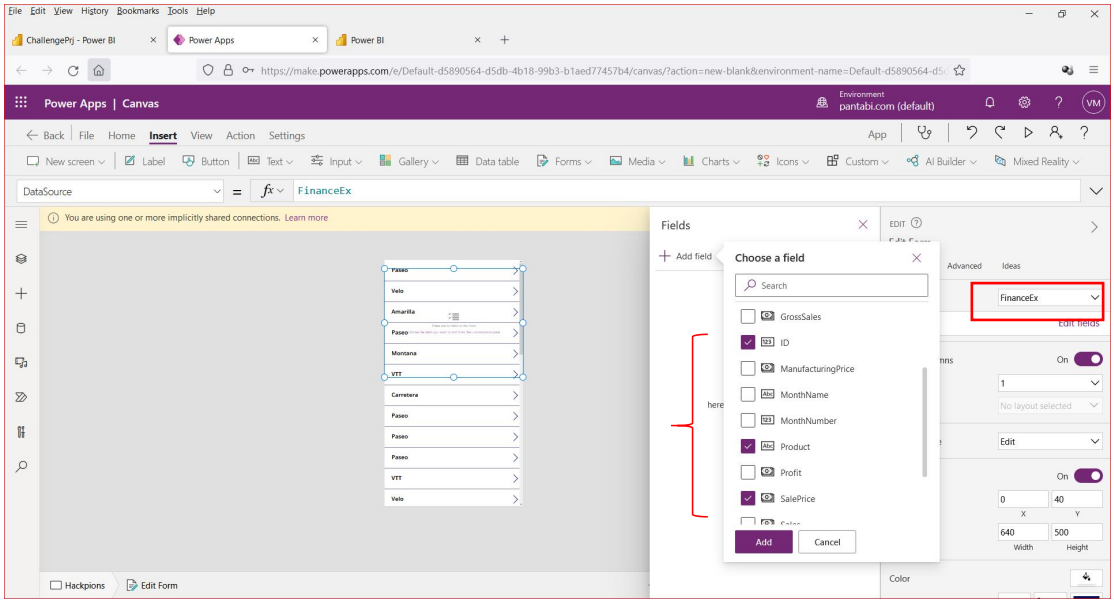


2. Click on the Power Apps visuals and select the required fields. Next, it prompts us to create a new app.



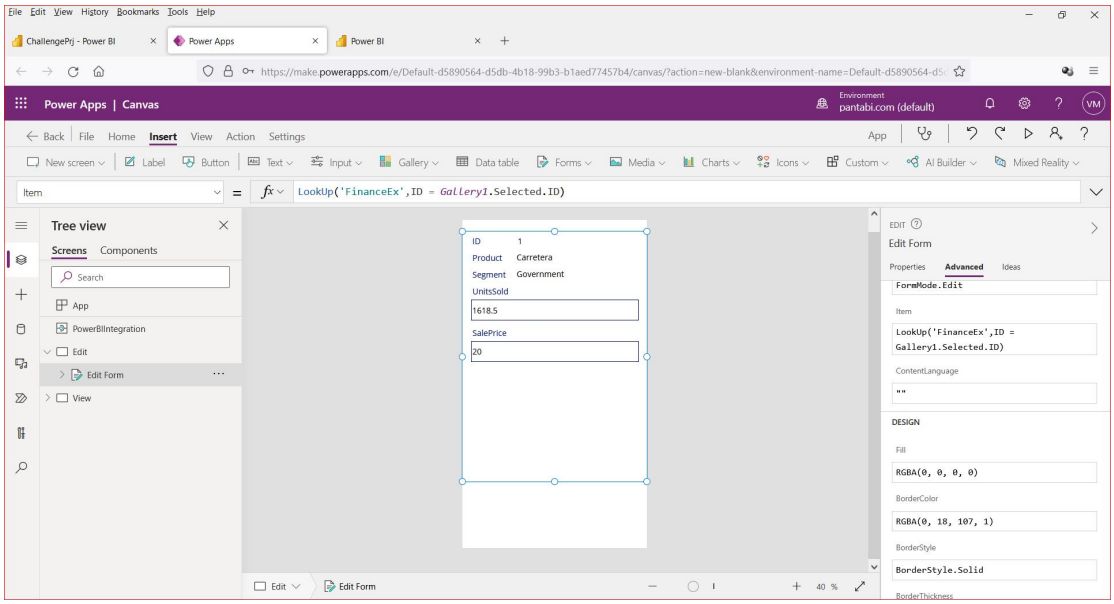
3. On clicking Create new, it navigates to the Power Apps Studio. Power Apps will automatically create data integration with the selected fields that are passed from Power BI. In case, the DataSource property is empty then select ‘SQL Server’ >> ‘Create Connection String’ >> Select the Database >> Select the DataTable



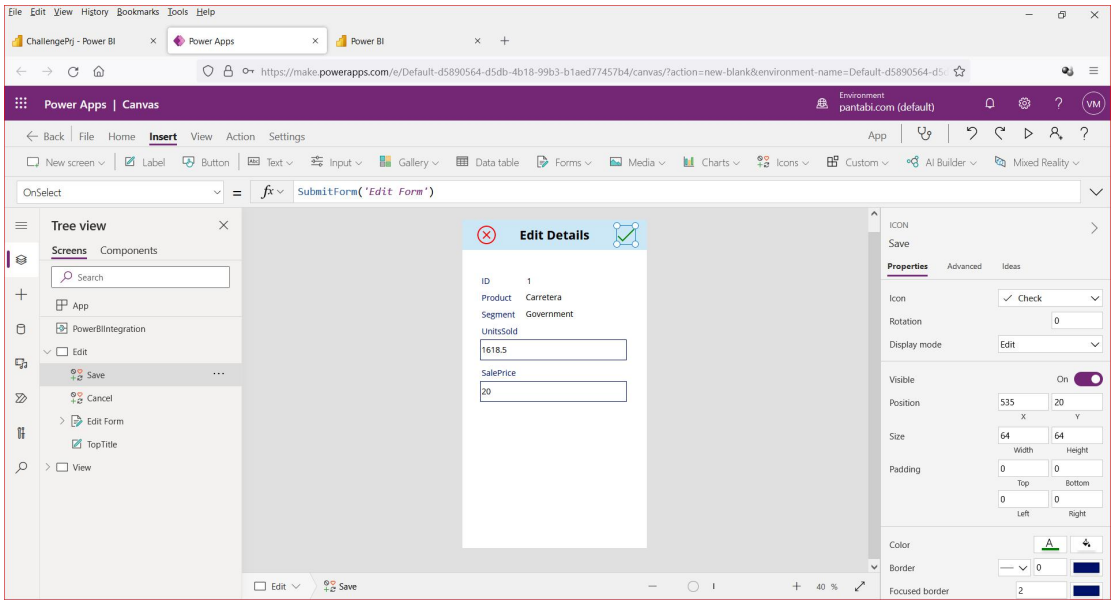


(Figure i: DataSource is ‘FinanceEx’ data table and the required fields are selected)

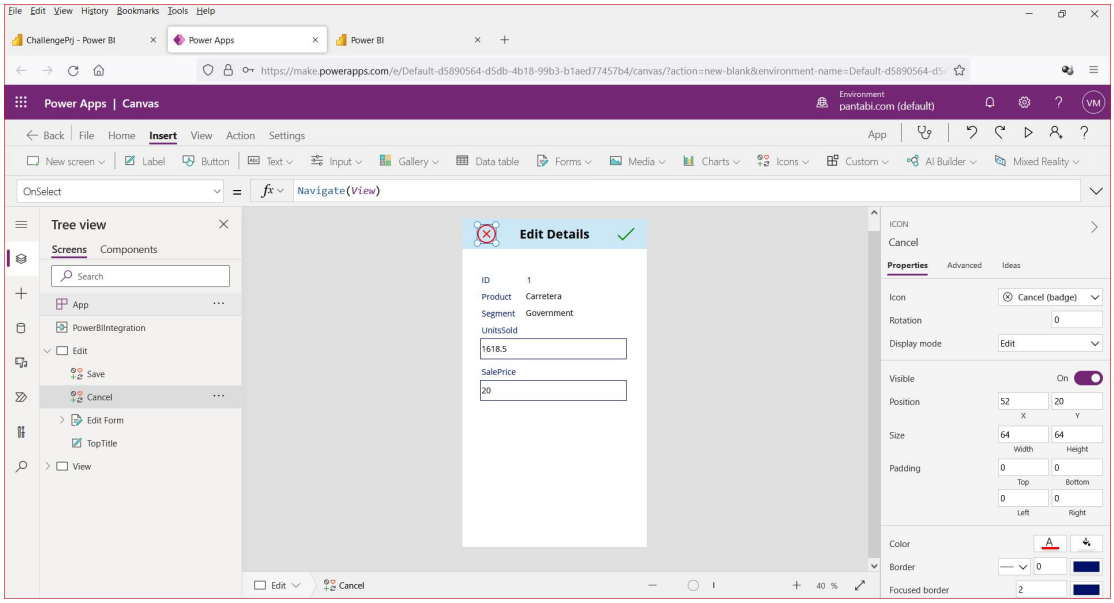
4. Create two screens ‘View’ and ‘Edit’. In order to update the record in the database 'Forms' option is used. Select and arrange all the required fields. To edit fields use Fields -> Edit Fields.



5. Add Submit and Cancel button on the Edit Form for submitting and canceling the update operation, and later navigate to the View screen.

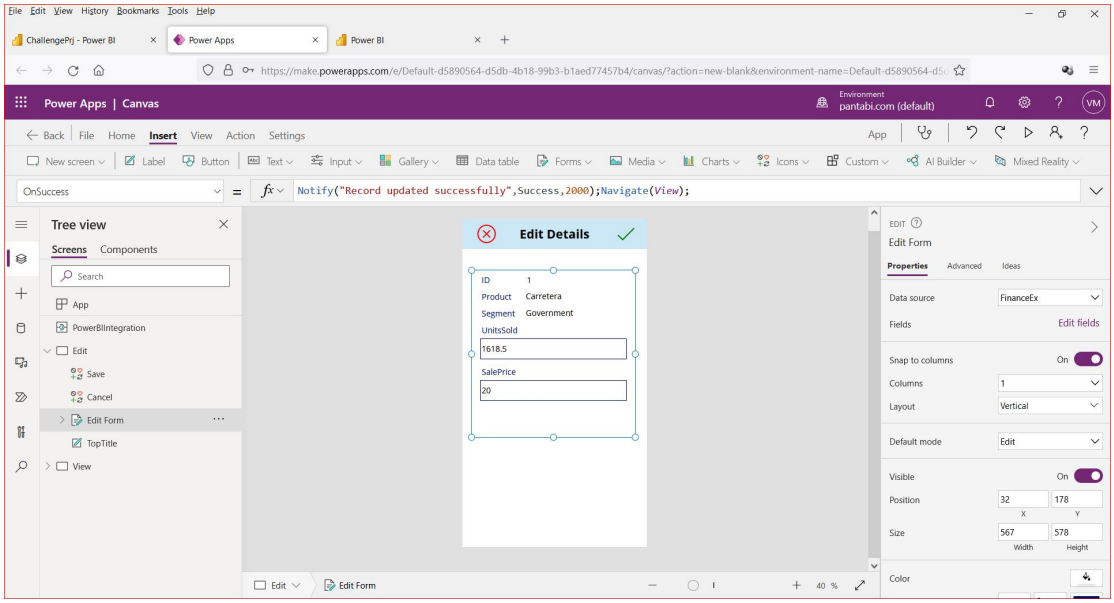


(Figure i: Green check mark represents form submit button)

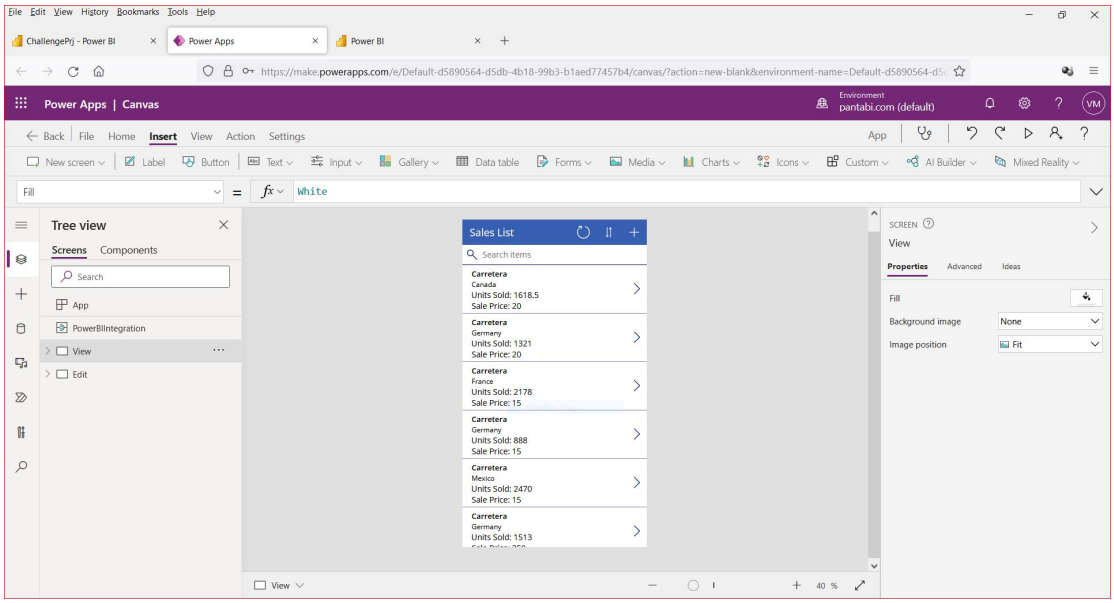


(Figure ii: Red cross mark represents form cancel button)

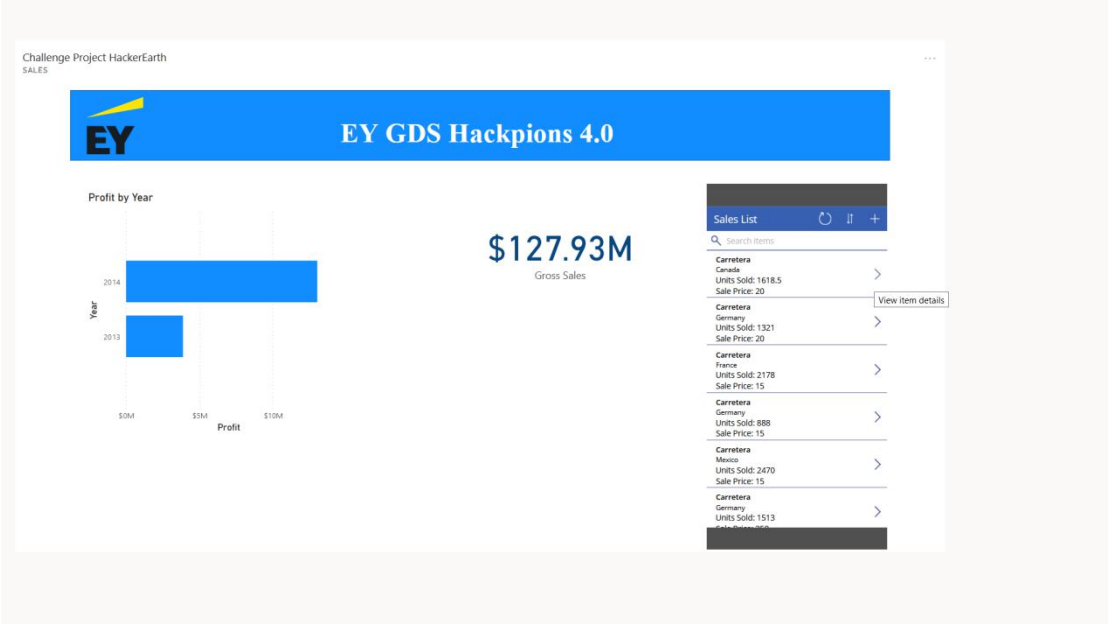
6. The Edit Form has an event ‘OnSuccess’ that executes after submitting the form.



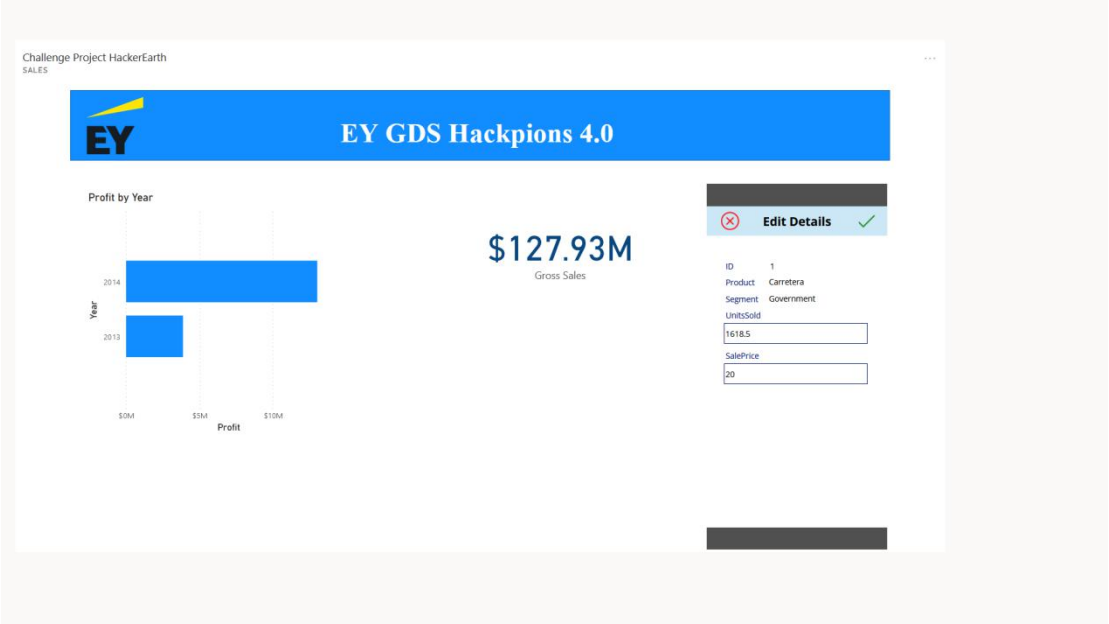
7. After all the changes are done, save the app.



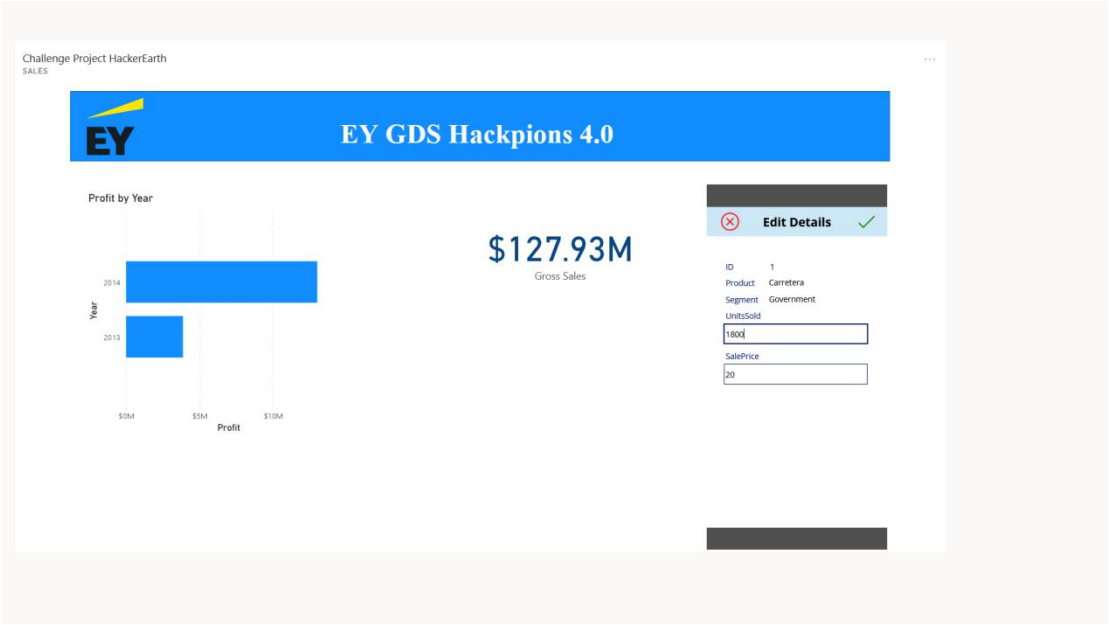
8. Then the app created is added to the Power BI report.



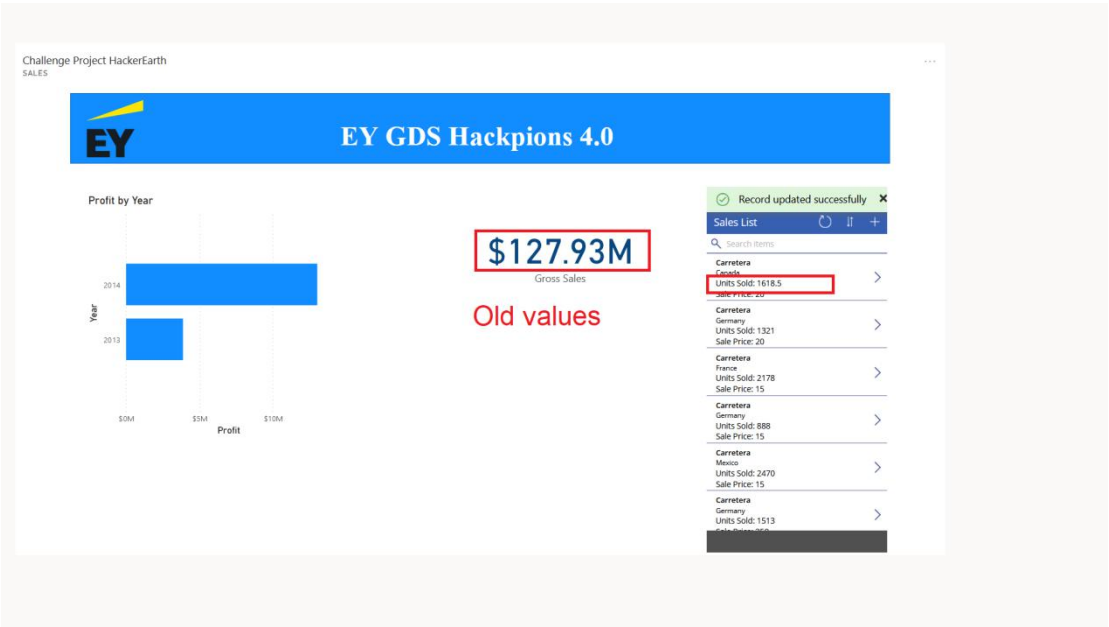
9. Demo of updating the field ‘UnitsSold’, and the ‘Gross Sales’ reflects the changes.



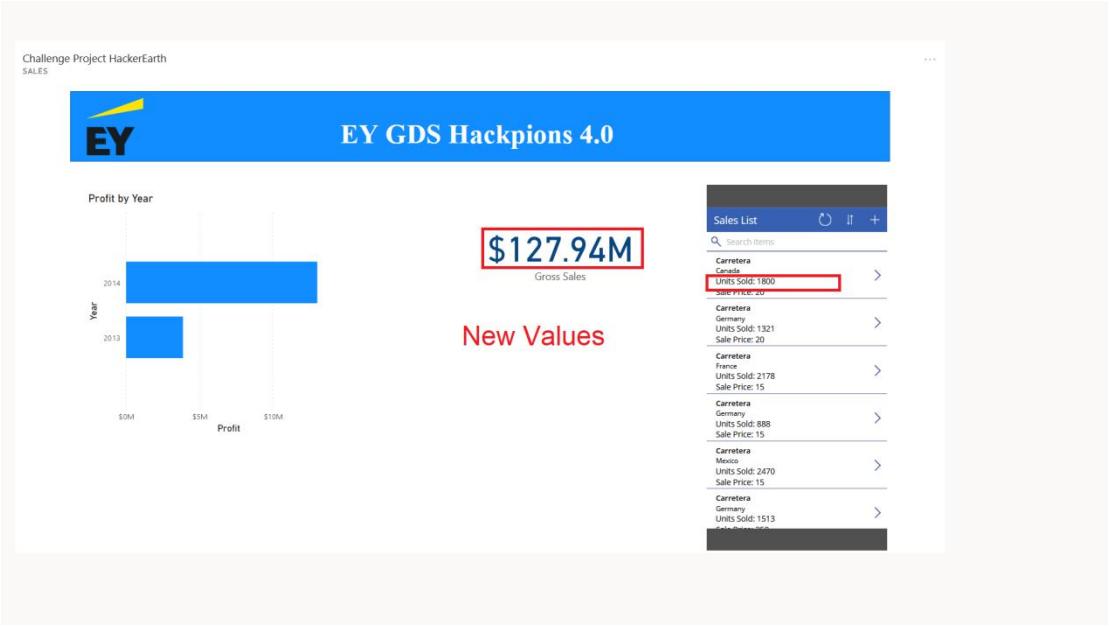
(Figure i: Edit the first record from the list view)



(Figure ii: Change the UnitsSold textbox value)



(Figure iii: After clicking the submit button, it navigates to the list view showing the records updated message, but waiting for the new data to be populated)



(Figure iv: The list view and Gross Sales shows the updated values)

So, in this way, we can achieve in Power BI report to update records and reflect the changes immediately by using Power Apps write-back function with DirectQuery mode.