

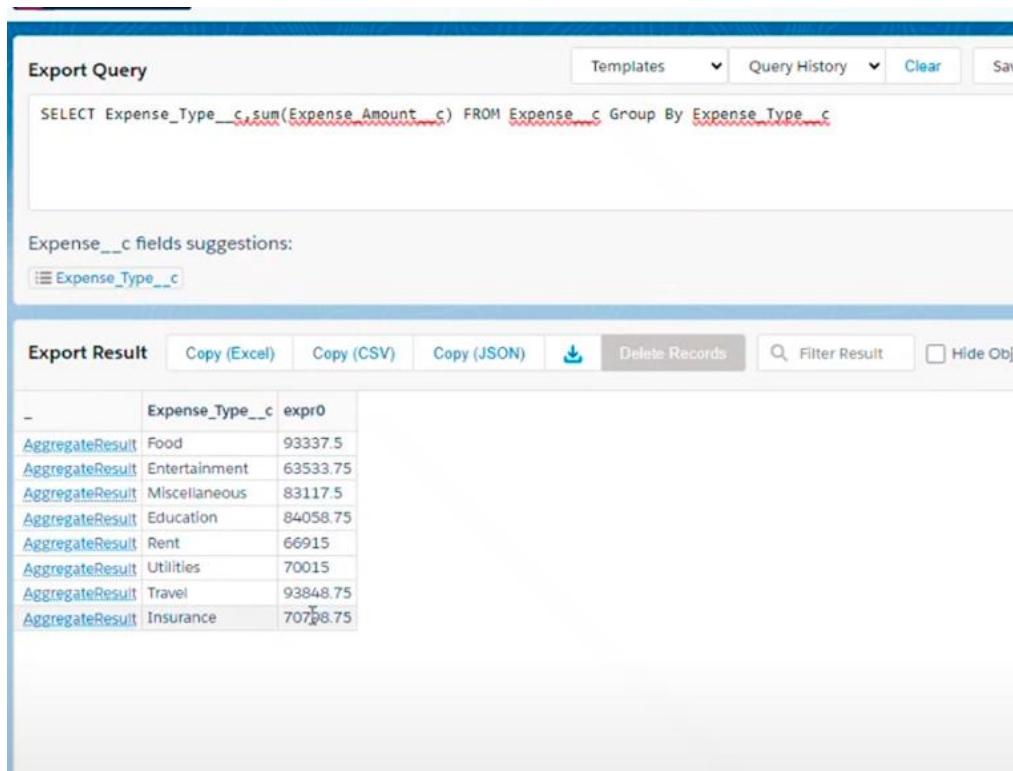
Expense Tracker Project (Phase 8: Data Management & Deployment)

Goal

The goal of this project is to build a **Salesforce-based Expense Tracker** that ensures accurate data handling, security, and a smooth transition from sandbox to production. Proper data management and deployment practices help maintain **data integrity, reliability, and system readiness** for organizational use.

Problem Statement

Managing and migrating expense data manually can lead to errors, duplicates, and inconsistencies. Without proper deployment procedures, the system risks data loss and operational disruptions. Implementing structured data management and deployment processes ensures the Expense Tracker is accurate, secure, and production-ready.



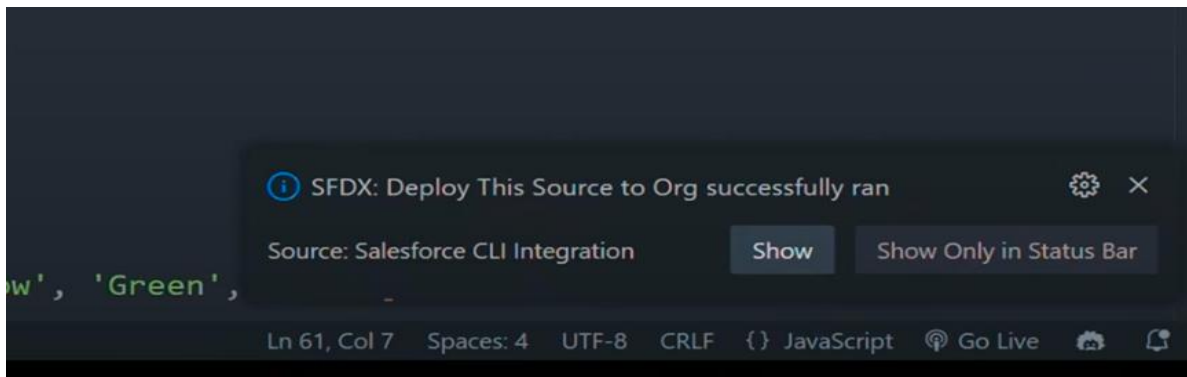
The screenshot shows the Salesforce Query Editor interface. At the top, there's a header with 'Export Query', 'Templates', 'Query History', 'Clear', and 'Save' buttons. Below this is a text area containing the SOQL query: `SELECT Expense_Type__c, sum(Expense_Amount__c) FROM Expense__c Group By Expense_Type__c`. Underneath the query is a section for 'Expense__c fields suggestions' with a dropdown menu showing 'Expense_Type__c'. Below the suggestions is a section for 'Export Result' with buttons for 'Copy (Excel)', 'Copy (CSV)', 'Copy (JSON)', a download icon, 'Delete Records', 'Filter Result', and 'Hide Object Columns'. The results are displayed in a table with three columns: an unnamed column, 'Expense_Type__c', and 'expr0'. The table contains eight rows of data, each starting with 'AggregateResult'.

	Expense_Type__c	expr0
AggregateResult	Food	93337.5
AggregateResult	Entertainment	63533.75
AggregateResult	Miscellaneous	83117.5
AggregateResult	Education	84058.75
AggregateResult	Rent	66915
AggregateResult	Utilities	70015
AggregateResult	Travel	93848.75
AggregateResult	Insurance	70728.75

Phase 8: Data Management & Deployment

Data Import & Migration

- Imported **employee and expense records** using Salesforce Data Loader.
- Migrated existing expense and approval data to maintain continuity.
- Verified data consistency after import to avoid duplication and errors.



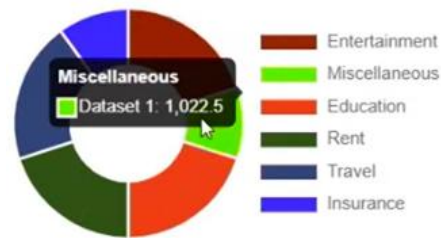
Duplicate Management

- Defined **Duplicate Rules** to prevent multiple entries for the same expense or employee.
- Implemented matching criteria based on **Employee ID, Expense ID, and Date**.
- Reduced errors and improved data accuracy by preventing duplicate records.

```
function getRandomColor() {  
  var letters = '0123456789ABCDEF';  
  var color = '#';  
  for (var i = 0; i < 6; i++) {  
    color += letters[Math.floor(Math.random() * 16)];  
  }  
  return color;  
}
```

Deployment

- Prepared the system for deployment from **sandbox to production**.
- Ensured all configurations, customizations, and workflows were correctly migrated.
- Established scheduled backups and data validation checks to maintain integrity.



Transaction Committed

Any records that the flow was ready to create, update, or delete were committed to the database.

SCREEN: Date Range

Date: Start_Date

Label: Start Date

Value at run time: 1 September 2024

Date: End_Date

Label: End Date

Value at run time: 30 September 2024

Selected Navigation Button: NEXT

Transaction Committed

Any records that the flow was ready to create, update, or delete were committed to the database.

Conclusion

Phase 8 successfully implemented **data management and deployment practices** for the Expense Tracker. By handling imports, preventing duplicates, validating data, and preparing the system for production, the project ensures **reliable, secure, and sustainable expense management** for long-term organizational use.