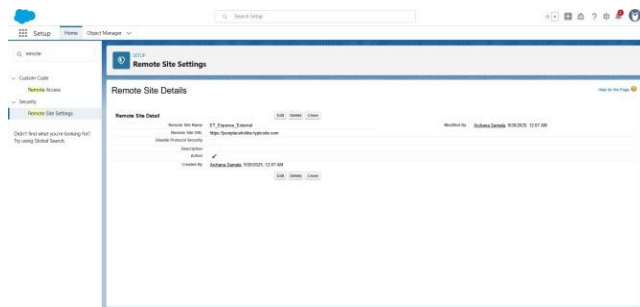


## Integration & External Access

In this phase, I implemented external integration features for the **Expense Tracker** project. The objective was to securely connect Salesforce with external systems, exchange data, and enable real-time, event-driven communication. The steps are detailed below.

### 1. Remote Site Settings

- Created a **Remote Site Setting** named **ET\_Expense\_External** to securely store the external API URL and authentication details:
  - Label:** ET\_Expense\_External
  - Name:** ET\_Expense\_External
  - URL:** https://jsonplaceholder.typicode.com
- This configuration allows Salesforce to perform callouts without manually handling authentication or site verification.

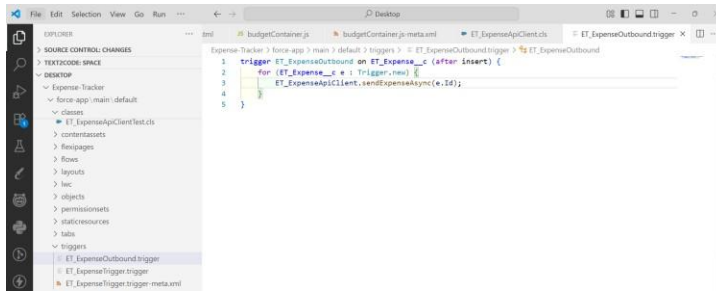


### 2. Apex Callouts

- Developed an Apex class **ET\_ExpenseApiClient** to make POST callouts to the external API whenever a new expense is created.
- The callout sends expense details including **Amount**, **Date**, **Category**, and **Budget**.
- The endpoint uses a **Named Credential** (callout: ET\_Expense\_External) for secure access.
- Callouts are executed asynchronously using `@future(callout=true)` to ensure Salesforce can push new expense data without blocking operations.

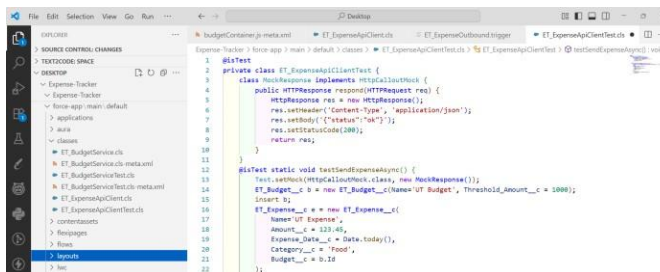
### 3. Trigger for Automation

- Created a trigger **ET\_ExpenseOutbound** on `ET_Expense__c` to automatically call `ET_ExpenseApiClient.sendExpenseAsync()` after a new expense is inserted.
- This ensures that every time a new expense is recorded in Salesforce, the external system is notified immediately.



## 4. Test Class

- Developed a test class **ET\_ExpenseApiClientTest** using HttpCalloutMock to simulate API responses.
- The test inserts Budget and Expense records, then verifies that the callout is successfully executed.
- This ensures that callout logic is validated without making real external API calls.



## 5. Platform Events

- Created a **Platform Event** called **ET\_Expense\_Integration\_\_e** to broadcast expense details in real time.
- **Fields:** ExpenseId, Amount, Category, BudgetId
- Whenever an expense is created, Salesforce can publish this event, enabling real-time notifications and integration with external systems.

