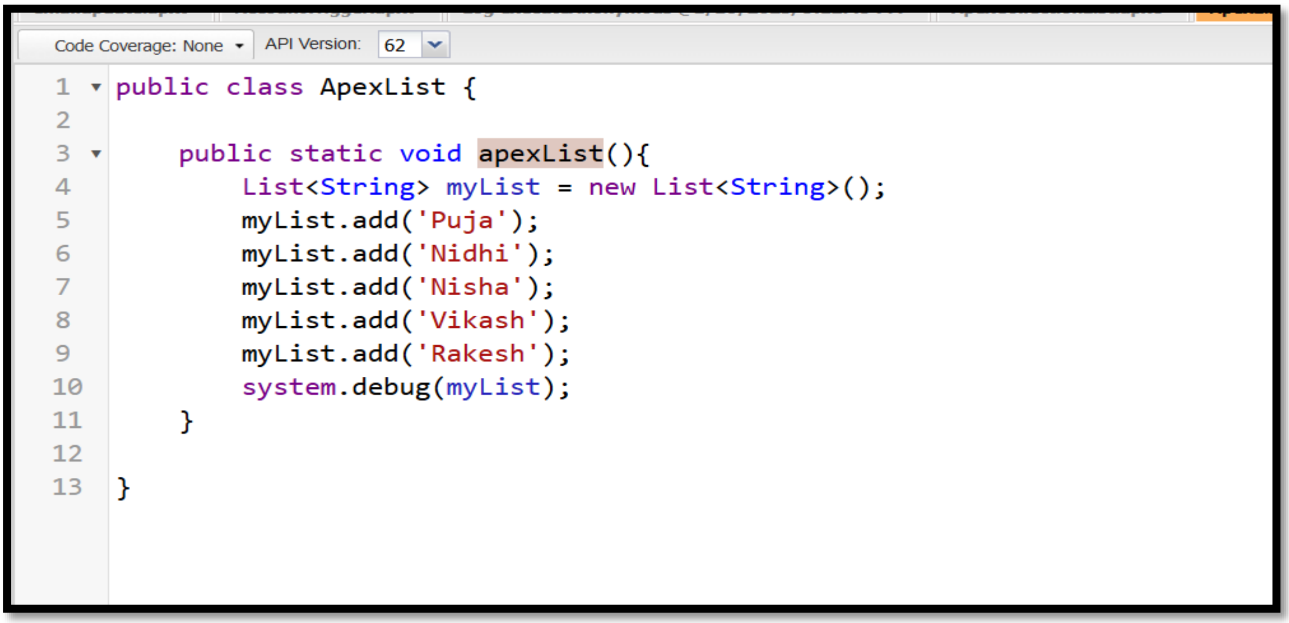
Collections and SOQL Assignments

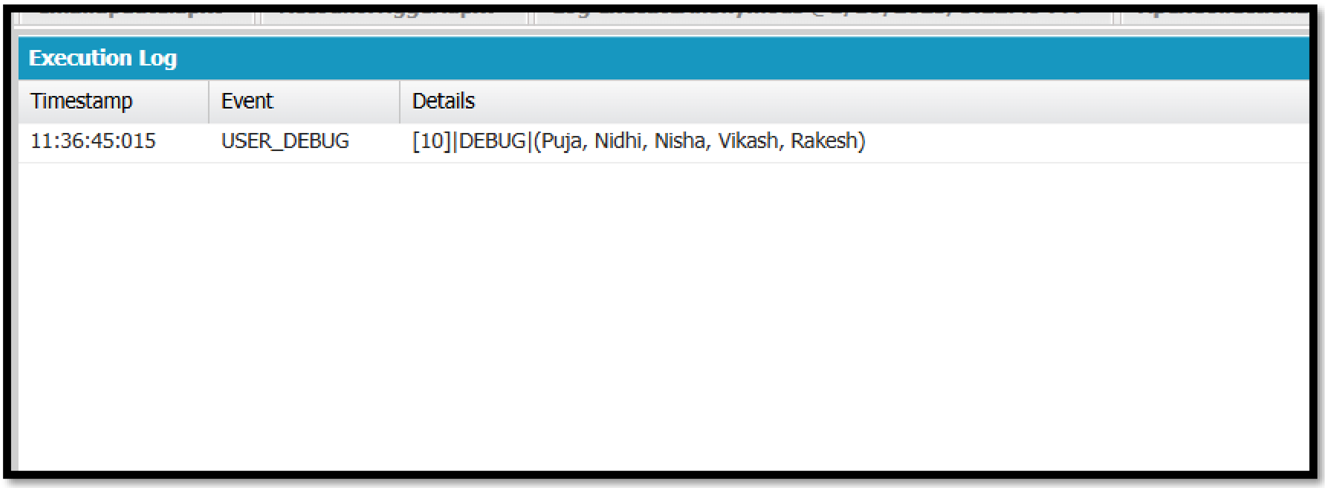
- ## Add the Values to the List



Code Coverage: None

API Version: 62

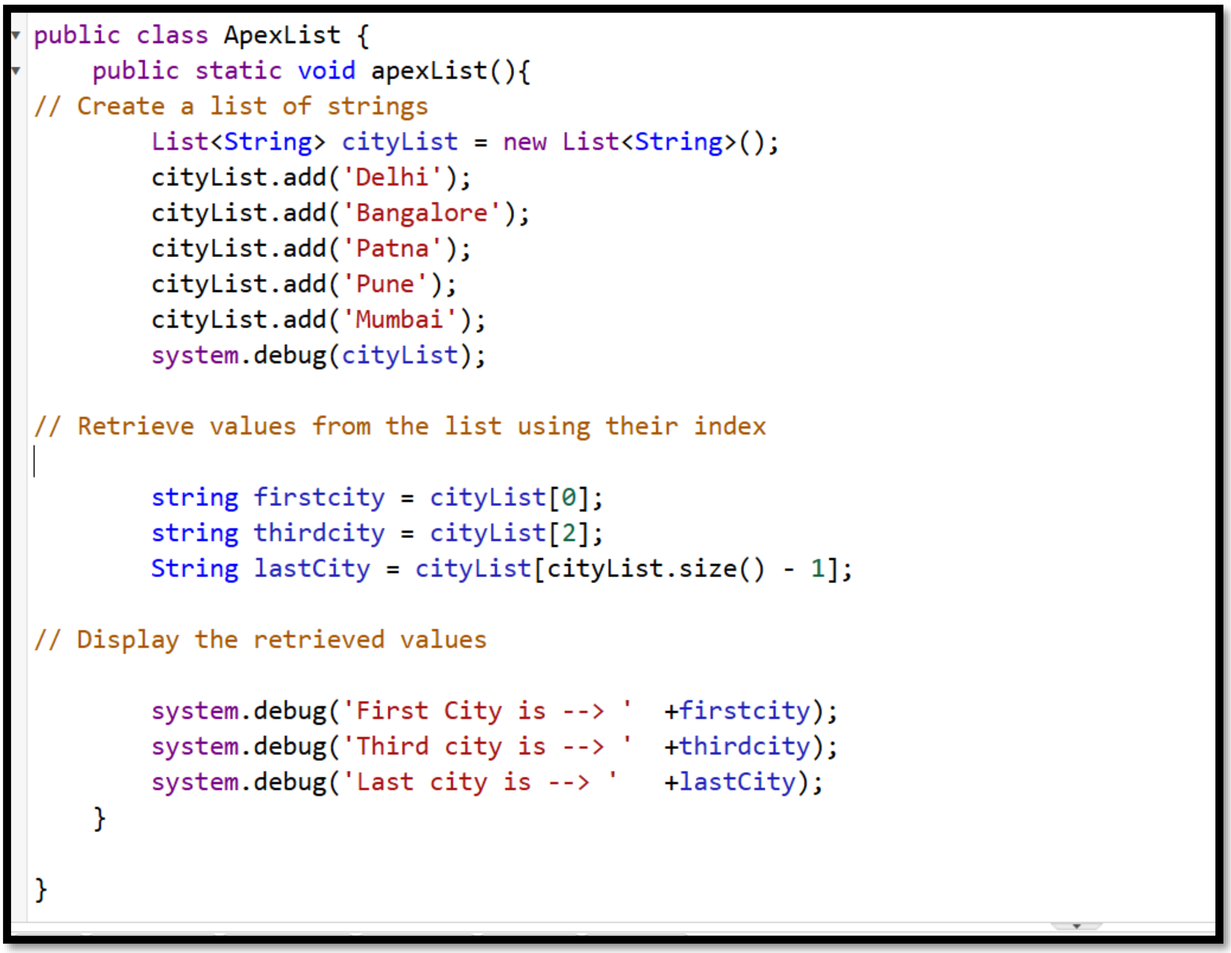
```
public class ApexList {

    public static void apexList(){
        List<String> myList = new List<String>();
        myList.add('Puja');
        myList.add('Nidhi');
        myList.add('Nisha');
        myList.add('Vikash');
        myList.add('Rakesh');
        system.debug(myList);
    }

}
```



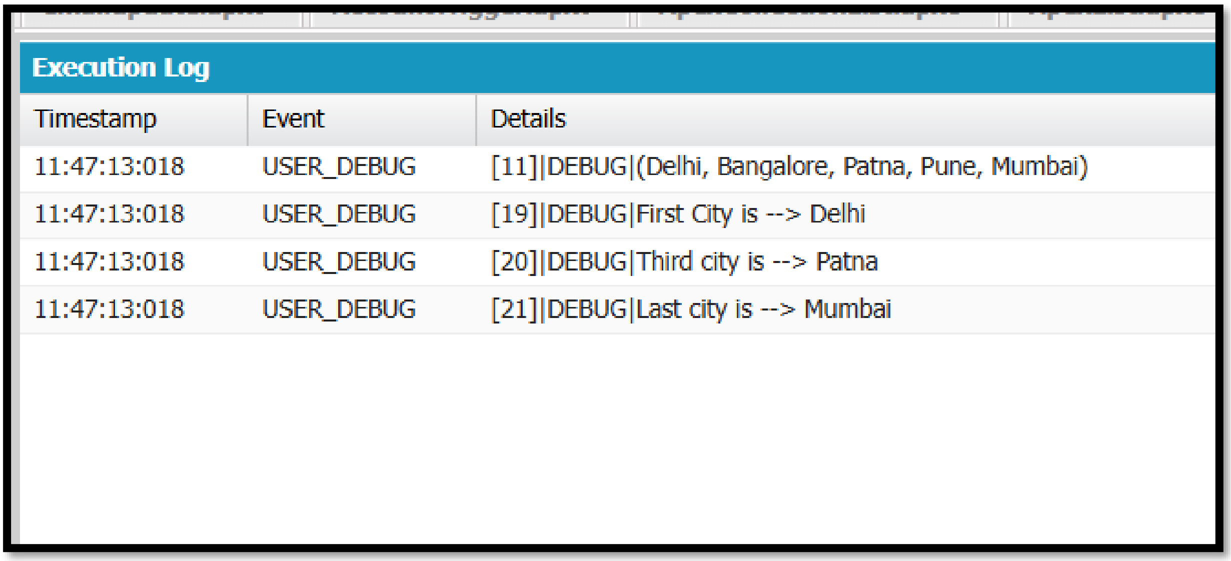
Execution Log

Timestamp	Event	Details
11:36:45:015	USER_DEBUG	[10]|DEBUG|(Puja, Nidhi, Nisha, Vikash, Rakesh)

- **Retrieve values from list using index.**



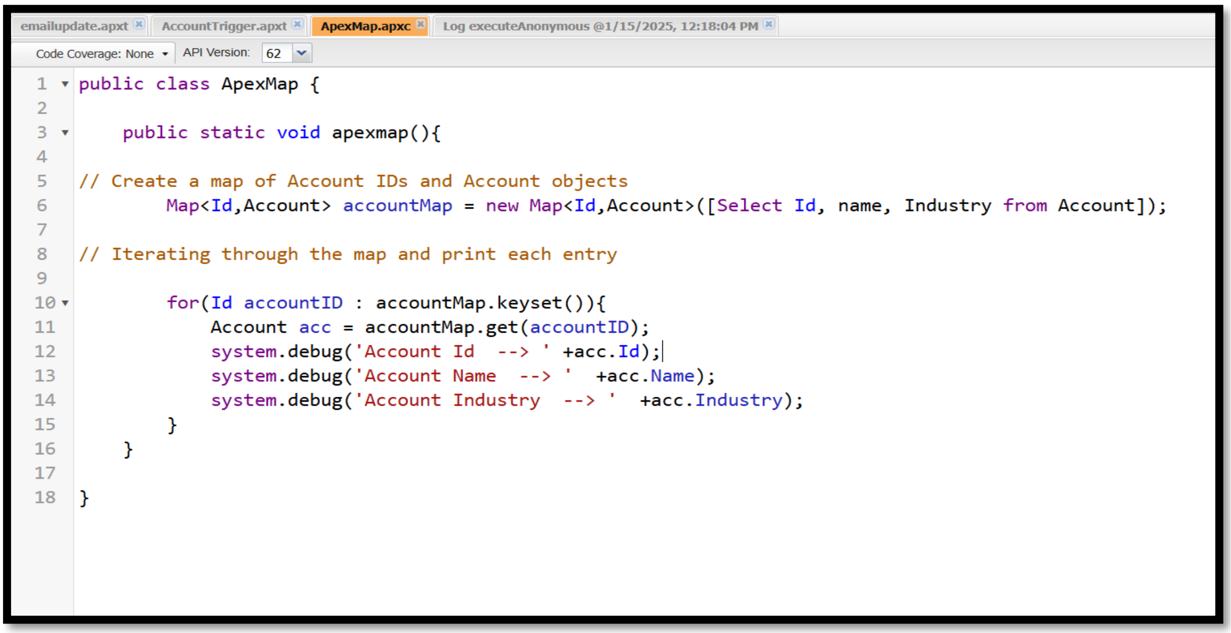
```
public class ApexList {
    public static void apexList(){
// Create a list of strings
        List<String> cityList = new List<String>();
        cityList.add('Delhi');
        cityList.add('Bangalore');
        cityList.add('Patna');
        cityList.add('Pune');
        cityList.add('Mumbai');
        system.debug(cityList);

// Retrieve values from the list using their index

        string firstcity = cityList[0];
        string thirdcity = cityList[2];
        String lastCity = cityList[cityList.size() - 1];

// Display the retrieved values

        system.debug('First City is --> '  +firstcity);
        system.debug('Third city is --> '  +thirdcity);
        system.debug('Last city is --> '   +lastCity);
    }

}
```



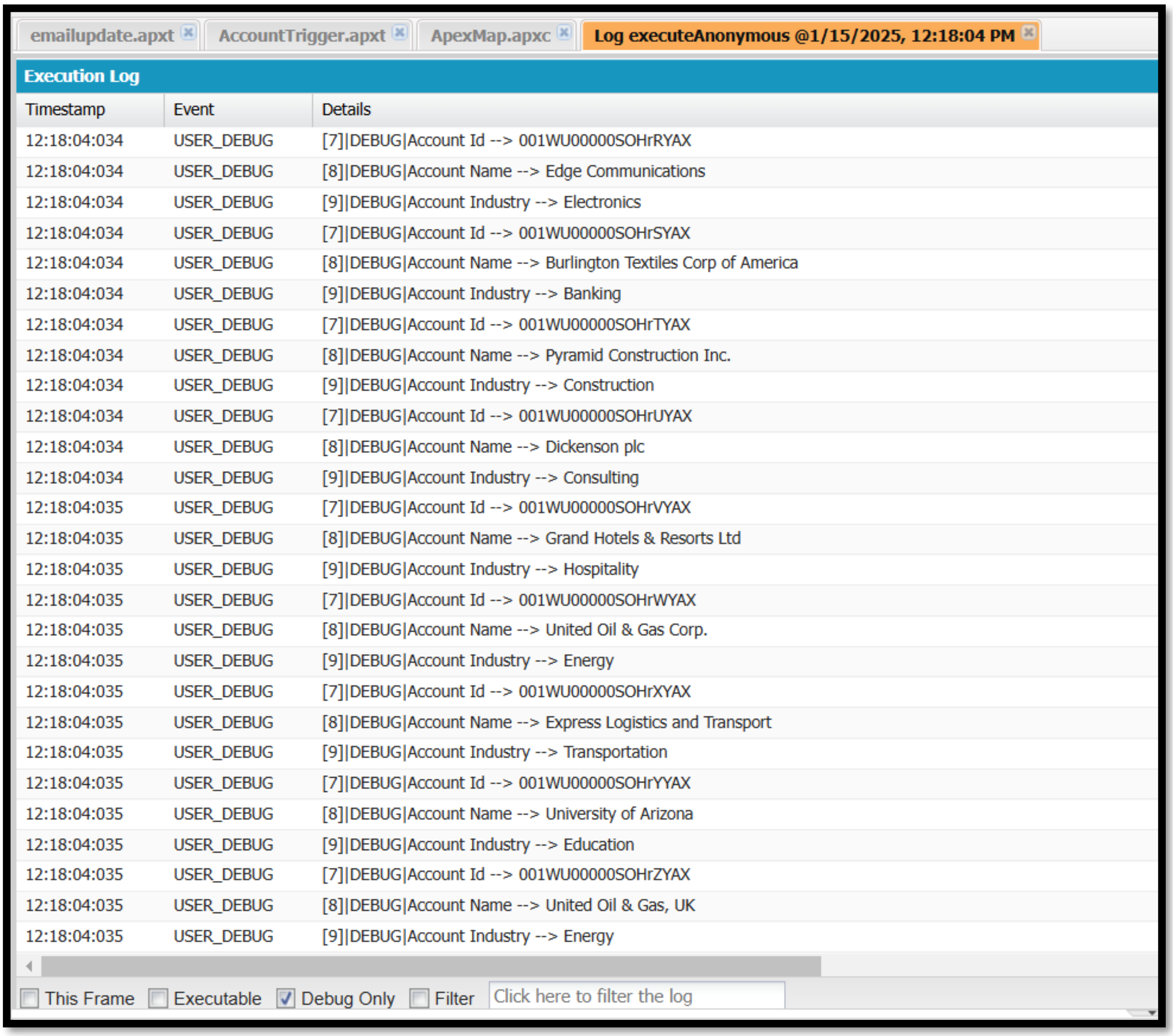
Execution Log

Timestamp	Event	Details
11:47:13:018	USER_DEBUG	[11]|DEBUG|(Delhi, Bangalore, Patna, Pune, Mumbai)
11:47:13:018	USER_DEBUG	[19]|DEBUG|First City is --> Delhi
11:47:13:018	USER_DEBUG	[20]|DEBUG|Third city is --> Patna
11:47:13:018	USER_DEBUG	[21]|DEBUG|Last city is --> Mumbai

- **Create a map of Accounts Ids and Accounts Objects.**

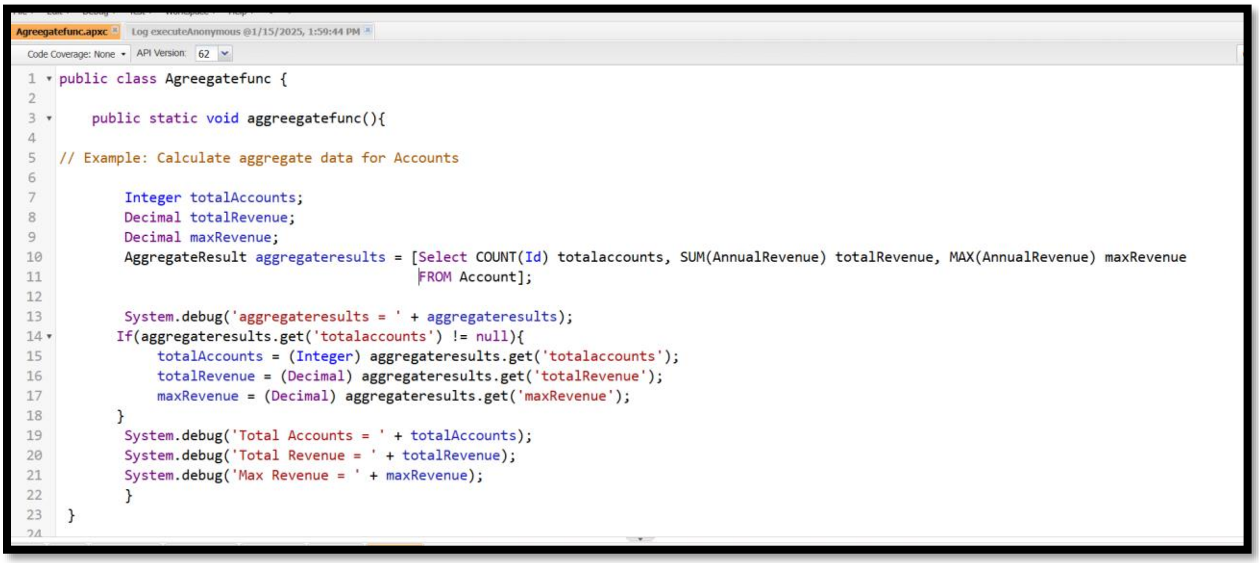


```
public class ApexMap {

    public static void apexmap(){

// Create a map of Account IDs and Account objects
        Map<Id,Account> accountMap = new Map<Id,Account>([Select Id, name, Industry from Account]);

// Iterating through the map and print each entry

        for(Id accountID : accountMap.keyset()){
            Account acc = accountMap.get(accountID);
            system.debug('Account Id  --> ' +acc.Id);
            system.debug('Account Name  --> '  +acc.Name);
            system.debug('Account Industry  --> '  +acc.Industry);
        }
    }

}
```

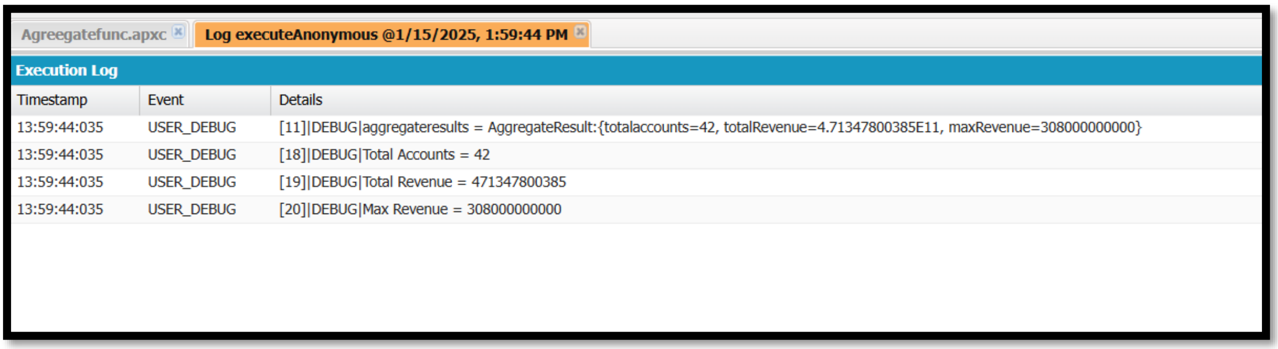


```
Timestamp      Event        Details
12:18:04:034   USER_DEBUG   [7]|DEBUG|Account Id --> 001WU00000SOHrRYAX
12:18:04:034   USER_DEBUG   [8]|DEBUG|Account Name --> Edge Communications
12:18:04:034   USER_DEBUG   [9]|DEBUG|Account Industry --> Electronics
12:18:04:034   USER_DEBUG   [7]|DEBUG|Account Id --> 001WU00000SOHrSYAX
12:18:04:034   USER_DEBUG   [8]|DEBUG|Account Name --> Burlington Textiles Corp of America
12:18:04:034   USER_DEBUG   [9]|DEBUG|Account Industry --> Banking
12:18:04:034   USER_DEBUG   [7]|DEBUG|Account Id --> 001WU00000SOHrTYAX
12:18:04:034   USER_DEBUG   [8]|DEBUG|Account Name --> Pyramid Construction Inc.
12:18:04:034   USER_DEBUG   [9]|DEBUG|Account Industry --> Construction
12:18:04:034   USER_DEBUG   [7]|DEBUG|Account Id --> 001WU00000SOHrUYAX
12:18:04:034   USER_DEBUG   [8]|DEBUG|Account Name --> Dickenson plc
12:18:04:034   USER_DEBUG   [9]|DEBUG|Account Industry --> Consulting
12:18:04:035   USER_DEBUG   [7]|DEBUG|Account Id --> 001WU00000SOHrVYAX
12:18:04:035   USER_DEBUG   [8]|DEBUG|Account Name --> Grand Hotels & Resorts Ltd
12:18:04:035   USER_DEBUG   [9]|DEBUG|Account Industry --> Hospitality
12:18:04:035   USER_DEBUG   [7]|DEBUG|Account Id --> 001WU00000SOHrWYAX
12:18:04:035   USER_DEBUG   [8]|DEBUG|Account Name --> United Oil & Gas Corp.
12:18:04:035   USER_DEBUG   [9]|DEBUG|Account Industry --> Energy
12:18:04:035   USER_DEBUG   [7]|DEBUG|Account Id --> 001WU00000SOHrXYAX
12:18:04:035   USER_DEBUG   [8]|DEBUG|Account Name --> Express Logistics and Transport
12:18:04:035   USER_DEBUG   [9]|DEBUG|Account Industry --> Transportation
12:18:04:035   USER_DEBUG   [7]|DEBUG|Account Id --> 001WU00000SOHrYYAX
12:18:04:035   USER_DEBUG   [8]|DEBUG|Account Name --> University of Arizona
12:18:04:035   USER_DEBUG   [9]|DEBUG|Account Industry --> Education
12:18:04:035   USER_DEBUG   [7]|DEBUG|Account Id --> 001WU00000SOHrZYAX
12:18:04:035   USER_DEBUG   [8]|DEBUG|Account Name --> United Oil & Gas, UK
12:18:04:035   USER_DEBUG   [9]|DEBUG|Account Industry --> Energy
```

Write an example of aggregate functions without using a GROUP BY Clause.



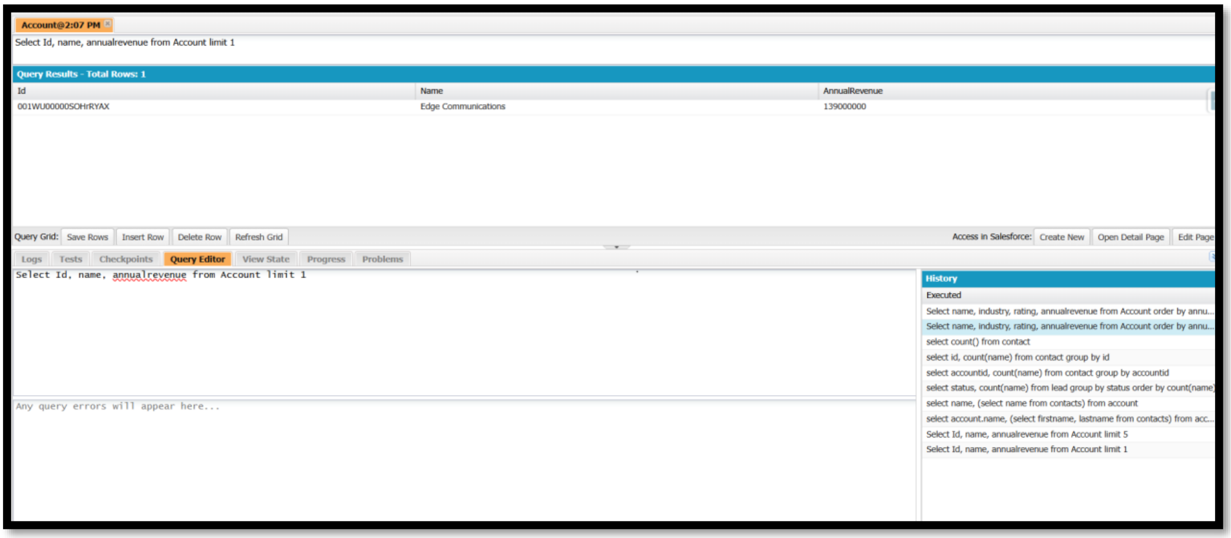
```
public class Agreegatefunc {

    public static void aggreegatefunc(){

// Example: Calculate aggregate data for Accounts

        Integer totalAccounts;
        Decimal totalRevenue;
        Decimal maxRevenue;
        AggregateResult aggregateresults = [Select COUNT(Id) totalaccounts, SUM(AnnualRevenue) totalRevenue, MAX(AnnualRevenue) maxRevenue
                                            FROM Account];

        System.debug('aggregateresults = ' + aggregateresults);
       If(aggregateresults.get('totalaccounts') != null){
            totalAccounts = (Integer) aggregateresults.get('totalaccounts');
            totalRevenue = (Decimal) aggregateresults.get('totalRevenue');
            maxRevenue = (Decimal) aggregateresults.get('maxRevenue');
       }
        System.debug('Total Accounts = ' + totalAccounts);
        System.debug('Total Revenue = ' + totalRevenue);
        System.debug('Max Revenue = ' + maxRevenue);
        }
 }
```



Execution Log

Timestamp	Event	Details
13:59:44:035	USER_DEBUG	[11]|DEBUG|aggregateresults = AggregateResult:{totalaccounts=42, totalRevenue=4.71347800385E11, maxRevenue=308000000000}
13:59:44:035	USER_DEBUG	[18]|DEBUG|Total Accounts = 42
13:59:44:035	USER_DEBUG	[19]|DEBUG|Total Revenue = 471347800385
13:59:44:035	USER_DEBUG	[20]|DEBUG|Max Revenue = 308000000000

- **Write an Example using SOQL Queries That Run One Record.**



Select Id, name, annualrevenue from Account limit 1

Query Results - Total Rows: 1

Id	Name	AnnualRevenue
001WU00000SOHrRYAX	Edge Communications	139000000

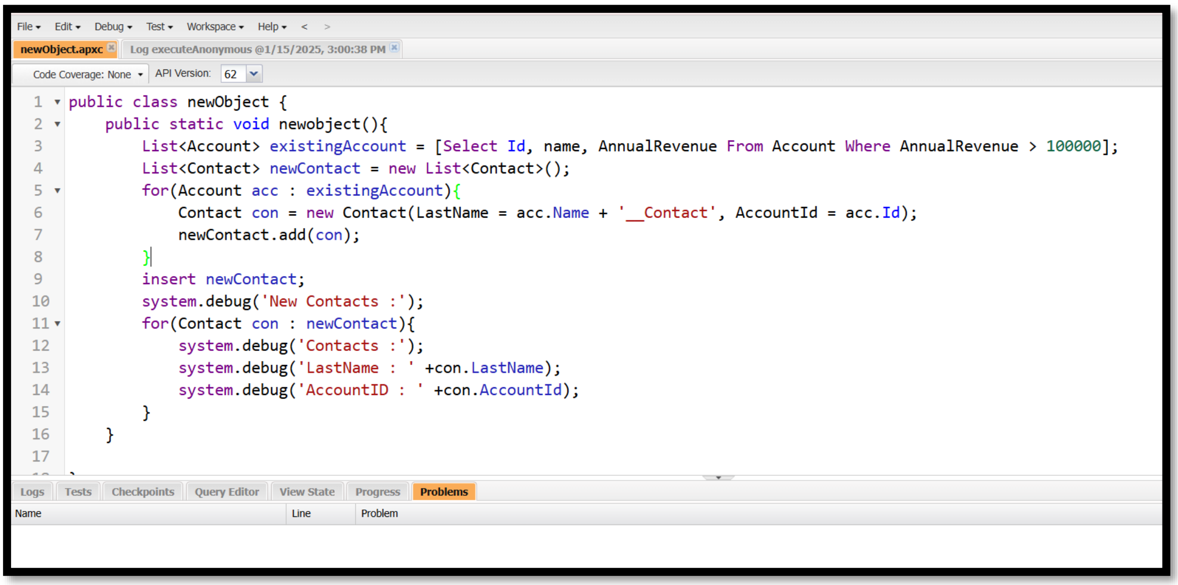
```
Select Id, name, annualrevenue from Account limit 1
```

```
Any query errors will appear here...
```

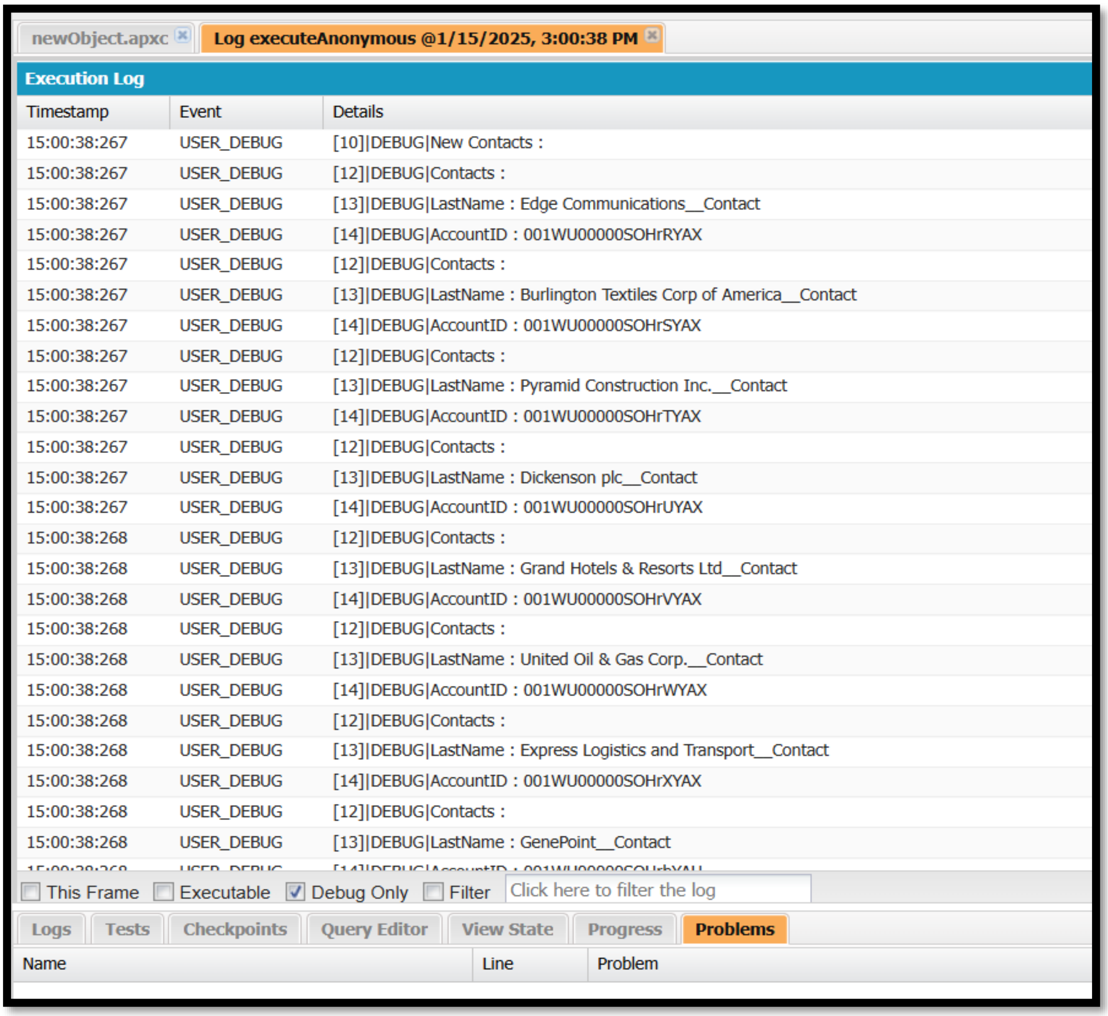
History

Executed
Select name, industry, rating, annualrevenue from Account order by annu...
Select name, industry, rating, annualrevenue from Account order by annu...
select count() from contact
select id, count(name) from contact group by id
select accountid, count(name) from contact group by accountid
select status, count(name) from lead group by status order by count(name)
select name, (select name from contacts) from account
select account.name, (select firstname, lastname from contacts) from acc...
Select Id, name, annualrevenue from Account limit 5
Select Id, name, annualrevenue from Account limit 1

- **Create a new Object from SOQL Queries on existing ones.**



```
public class newObject {
    public static void newobject(){
        List<Account> existingAccount = [Select Id, name, AnnualRevenue From Account Where AnnualRevenue > 100000];
        List<Contact> newContact = new List<Contact>();
        for(Account acc : existingAccount){
            Contact con = new Contact(LastName = acc.Name + '__Contact', AccountId = acc.Id);
            newContact.add(con);
        }
        insert newContact;
        system.debug('New Contacts :');
        for(Contact con : newContact){
            system.debug('Contacts :');
            system.debug('LastName : ' +con.LastName);
            system.debug('AccountID : ' +con.AccountId);
        }
    }

}
```



```
Timestamp      Event         Details
15:00:38:267   USER_DEBUG    [10]|DEBUG|New Contacts :
15:00:38:267   USER_DEBUG    [12]|DEBUG|Contacts :
15:00:38:267   USER_DEBUG    [13]|DEBUG|LastName : Edge Communications__Contact
15:00:38:267   USER_DEBUG    [14]|DEBUG|AccountID : 001WU00000SOHrRYAX
15:00:38:267   USER_DEBUG    [12]|DEBUG|Contacts :
15:00:38:267   USER_DEBUG    [13]|DEBUG|LastName : Burlington Textiles Corp of America__Contact
15:00:38:267   USER_DEBUG    [14]|DEBUG|AccountID : 001WU00000SOHrSYAX
15:00:38:267   USER_DEBUG    [12]|DEBUG|Contacts :
15:00:38:267   USER_DEBUG    [13]|DEBUG|LastName : Pyramid Construction Inc.__Contact
15:00:38:267   USER_DEBUG    [14]|DEBUG|AccountID : 001WU00000SOHrTYAX
15:00:38:267   USER_DEBUG    [12]|DEBUG|Contacts :
15:00:38:267   USER_DEBUG    [13]|DEBUG|LastName : Dickenson plc__Contact
15:00:38:267   USER_DEBUG    [14]|DEBUG|AccountID : 001WU00000SOHrUYAX
15:00:38:268   USER_DEBUG    [12]|DEBUG|Contacts :
15:00:38:268   USER_DEBUG    [13]|DEBUG|LastName : Grand Hotels & Resorts Ltd__Contact
15:00:38:268   USER_DEBUG    [14]|DEBUG|AccountID : 001WU00000SOHrVYAX
15:00:38:268   USER_DEBUG    [12]|DEBUG|Contacts :
15:00:38:268   USER_DEBUG    [13]|DEBUG|LastName : United Oil & Gas Corp.__Contact
15:00:38:268   USER_DEBUG    [14]|DEBUG|AccountID : 001WU00000SOHrWYAX
15:00:38:268   USER_DEBUG    [12]|DEBUG|Contacts :
15:00:38:268   USER_DEBUG    [13]|DEBUG|LastName : Express Logistics and Transport__Contact
15:00:38:268   USER_DEBUG    [14]|DEBUG|AccountID : 001WU00000SOHrXYAX
15:00:38:268   USER_DEBUG    [12]|DEBUG|Contacts :
15:00:38:268   USER_DEBUG    [13]|DEBUG|LastName : GenePoint__Contact
15:00:38:268   USER_DEBUG    [14]|DEBUG|AccountID : 001WU00000SOHrbYAH
```