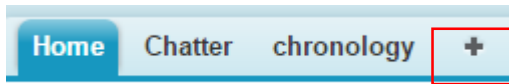
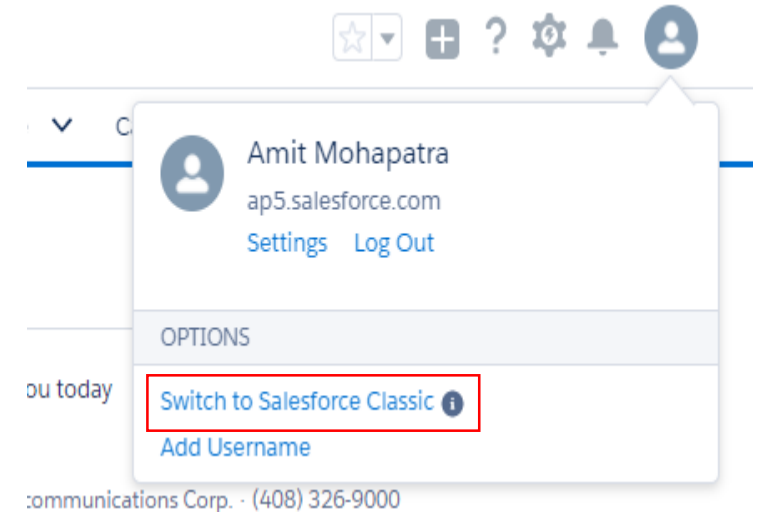
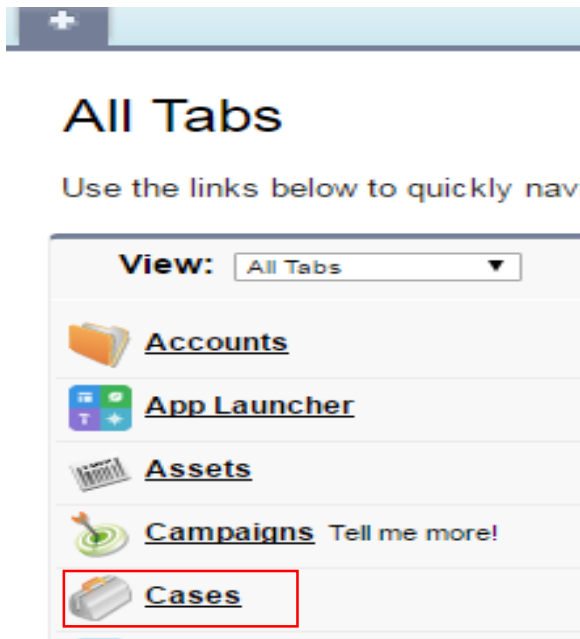


Create a case

1. Login to your salesforce developer account. For classic view click on “switch to sf classic”
2. Once login click on “+” sign link.

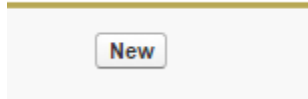


3. Then click on Cases link.

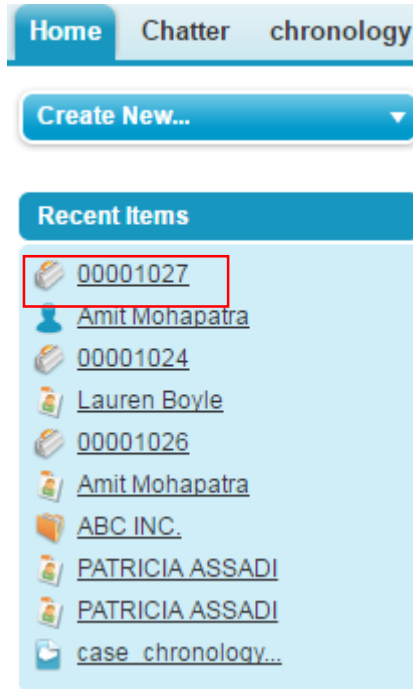


Create a case

4. Click on new to create a new case.

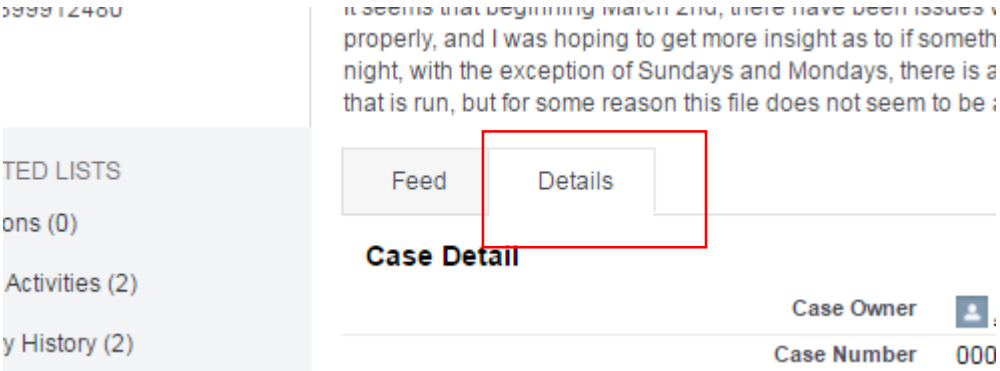


5. After creating a case click on home. You will find a case number like below.




Create a case

6. Once you click on case number you will be redirect to case page. Make sure you clicked on “details”.



Create a case

7. You can create some case events like open activities, activity history, case comments, attachments ...etc.. Like below.

 **Solutions**

[View Suggested Solutions](#) or [Find Solution](#)

No Solutions Attached

Open Activities

[New Task](#) [New Event](#)

Action	Subject	Name	Task	Due Date	Status	Priority	Assigned To
Edit Cls	Checked card feed settings	Amit Mohapatra	✓	3/14/2017	Not Started	Normal	Amit Mohapatra
Edit Cls	Checked database	Amit Mohapatra	✓	3/14/2017	Not Started	Normal	Amit Mohapatra

Activity History

[Log a Call](#) [Mail Merge](#) [Send an Email](#) [View All](#)

Action	Subject	Name	Task	Due Date	Assigned To	Last Modified Date/Time
Edit Del	Client Call	PATRICIA ASSADI	✓	3/14/2017	Amit Mohapatra	3/14/2017 2:49 AM
Edit Del	Client call	PATRICIA ASSADI	✓	3/14/2017	Amit Mohapatra	3/14/2017 2:48 AM

Case Comments

[New](#)

Action	Comment
	Created By: Amit Mohapatra (3/14/2017 2:53 AM) Hello Patricia,
Edit Del	Thank you for coming back to us. The term "Configurations Hidden" refers to the charges that are auto hidden and is not available to the users Concur profiles. For the Canadian Citi bank feed, Only late fees and payment transactions are auto hidden or Configurations Hidden from the users. Rest of the fees are available for your employees. Please see the attached screenshot for your reference. Warm Regards, Amit
Edit Del	Created By: Amit Mohapatra (3/14/2017 2:51 AM) Client Comments: Thanks. We will confirm this with Citibank. Also, do you know what the 'Configuration Hidden' is? This is something new that happened.
	Created By: Amit Mohapatra (3/14/2017 2:50 AM) Hello Patricia,
Edit Del	Thank you for contacting Concur Client Support. We apologize for the delay and understand your query. Unfortunately Concur has no control over the fact when the files are getting delivered. These files comes from the bank (data transmission teams). If there is a job runs, it will say "Success: No File". Currently payment transactions for the Citi bank feed are set to auto hide. if you would like we can change this setting and make all the payment transactions available to your employees. Kindly confirm.
Edit Del	Created By: Amit Mohapatra (3/14/2017 2:43 AM) case needs to be assigned to the Credit Cards services for further investigation

Attachments

[Attach File](#) [View All](#)

Action	File Name	Size	Last Modified	Created By
Edit View Del	Screen Shot.png	32KB	3/14/2017 2:52 AM	Amit Mohapatra

Case History

Date	User	Action
3/14/2017 2:51 AM	Amit Mohapatra	Changed Priority from High to Medium

Problem with Case Events

1. After you creating many case events, It will be difficult to find out which event occurred when. There is no order by date time in case events.
2. Also salesforce has no provide any application to visualize it in chronical order.
3. Ex. One “case comments” might be created before a “open activities”. One “open activities” might be created before attachment and so on... please follow previous image.

Solution

1. Added a custom button called “view case chronology”. Once you click on this it will redirect to a separate page with all case event details sorted by date time.
2. Also by hover, you will get all case details in single page.

The screenshot displays a Salesforce Case record for Case Number 00001024, titled "Design issue with mechanical rotor". The case is owned by Amit Mohapatra and is in a "New" status with a "Low" priority. The description is "Design issue with mechanical rotor".

Key details visible on the page include:

- Case Owner:** Amit Mohapatra
- Case Number:** 00001024
- Contact Name:** Lauren Boyle
- Account Name:** United Oil & Gas Corp.
- Type:** Mechanical
- Case Reason:** Equipment Design
- Date/Time Opened:** 2/15/2017 6:44 AM
- Product:** GC3040
- Potential Liability:** No
- Created By:** Amit Mohapatra, 2/15/2017 6:44 AM
- Subject:** Design issue with mechanical rotor
- Description:** Description
- Custom Links:** Up-sell / Cross-sell Opportunity

The "View Case Chronology" button is highlighted with a red box, indicating the solution described in the text. Below the case details, there is a "Solutions" section with no solutions attached and an "Open Activities" section with a table of tasks.

Action	Subject	Name	Task	Due Date	Status	Priority	Assigned To
Edit Cts	Call	Lauren Boyle	✓	2/20/2017	Deferred	Normal	Amit Mohapatra
Edit Cts	Call	Lauren Boyle	✓	2/21/2017	Not Started	Normal	Amit Mohapatra
Edit Cts	Send Quote	Lauren Boyle	✓	2/24/2017	In Progress	High	Amit Mohapatra
Edit Cts	Send Letter	Lauren Boyle	✓	2/27/2017	In Progress	Normal	Amit Mohapatra

Solution

ipp.wdf.sap.com X ipp.wdf.sap.com X Office / Project X Concur - Corp X tools/CaseChro X Online Markdo X Login | Salesfor X how to find sal X How do I find n X Reset Your Sec X Your new Your X Salesforce - De X

Secure | https://c.ap4.visual.force.com/apex/CaseChronologyPage?scontrolCaching=1&id=5006F00001MJv3M

Home Chatter chronology +

[Return to Case](#)

Case Profile

Case Number : 00001027	Case Owner : Amit Mohapatra	Status : New
Account Name : ABC INC.	Case Owner Role : NA	Priority : Medium
Subject : Canadian Credit Card Feed	Contact Name : PATRICIA ASSADI	Case Origin : Web
Description : It seems that beginning March 2nd, there have been issues with the credit card feed not running properly, and I was hoping to get more insight as to if something has changed. Typically each night, with the exception of Sundays and Mondays, there is a feed with credit card transactions that is run, but for some reason this file does not seem to be available at the regular time. Looking Import/Export Monitor at the dates of 3/2 and 3/7, the feed indicates 'No File'. The run numbers 3073, 3074, and 3080, files were not available. Can you please advise why these files were not available? It looks like the files were available the following day and were pulled in with the next run, but it is making our balancing processes inconsistent, and the US files appear to be unaffected. I need to find out where these files are coming from that they are unavailable at the time that this job runs.	Contact Id : 0036F0000269dpYQAQ	Closed : No
Case Reason : Performance	Created By : Amit Mohapatra	Deleted : No
Billing Country : NA	Modified By : Amit Mohapatra	Escalated : No
Case Type : Other	Date/Time Created Date : 2017-03-14 09:43:13	Engineering Req Number : NA
Product : GC1040	SLA Violation : No	Potential Liability : Yes
Date/Time Last Modified Date : 2017-03-14 09:51:12	Date of last comment : 2017-03-14 09:43:13	First Public comment added Date : 2017-03-14 09:43:13
Date/Time Closed : NA	Parent Case Number: NA	

Case History

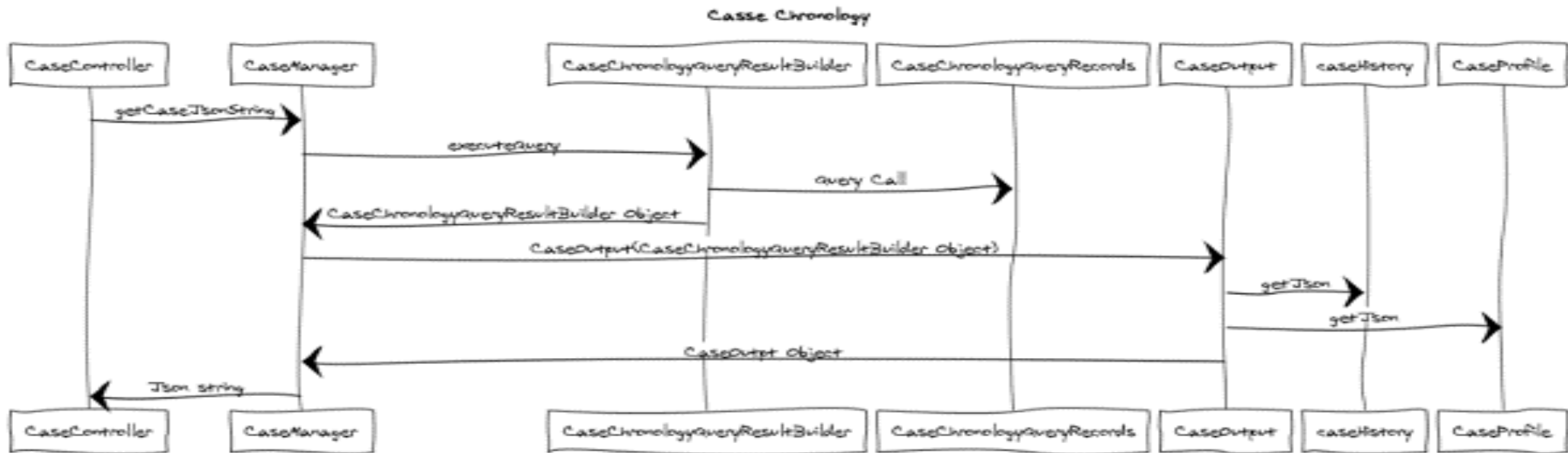
Date/Time	Created By	Modified By	Assigned To	Customer	Type	Summary	Details	Case Actions	Priority	Status
2017-03-14 09:53:03	Amit Mohapatra	Amit Mohapatra	NA			<p>Hello Patricia,</p> <p>Thank you for coming back to us. The term 'Configurations Hidden' refers to the charges that are auto hidden and is not available to the users Concur profiles.</p> <p>Comment Body : For the Canadian Citi bank feed, Only late fees and payment transactions are auto hidden or Configurations Hidden from the users. Rest of the fees are available for your employees. Please see the attached screenshot for your reference.</p> <p>Warm Regards, Amit</p> <p>Modified Date : 2017-03-14 09:53:03</p> <p>Deleted : No</p> <p>Published : No</p>	CaseComment Details	Edit	NA	Private

https://c.ap4.visual.force.com/apex/CaseChronologyPage?scontrolCaching=1&id=5006F00001MJv3M#

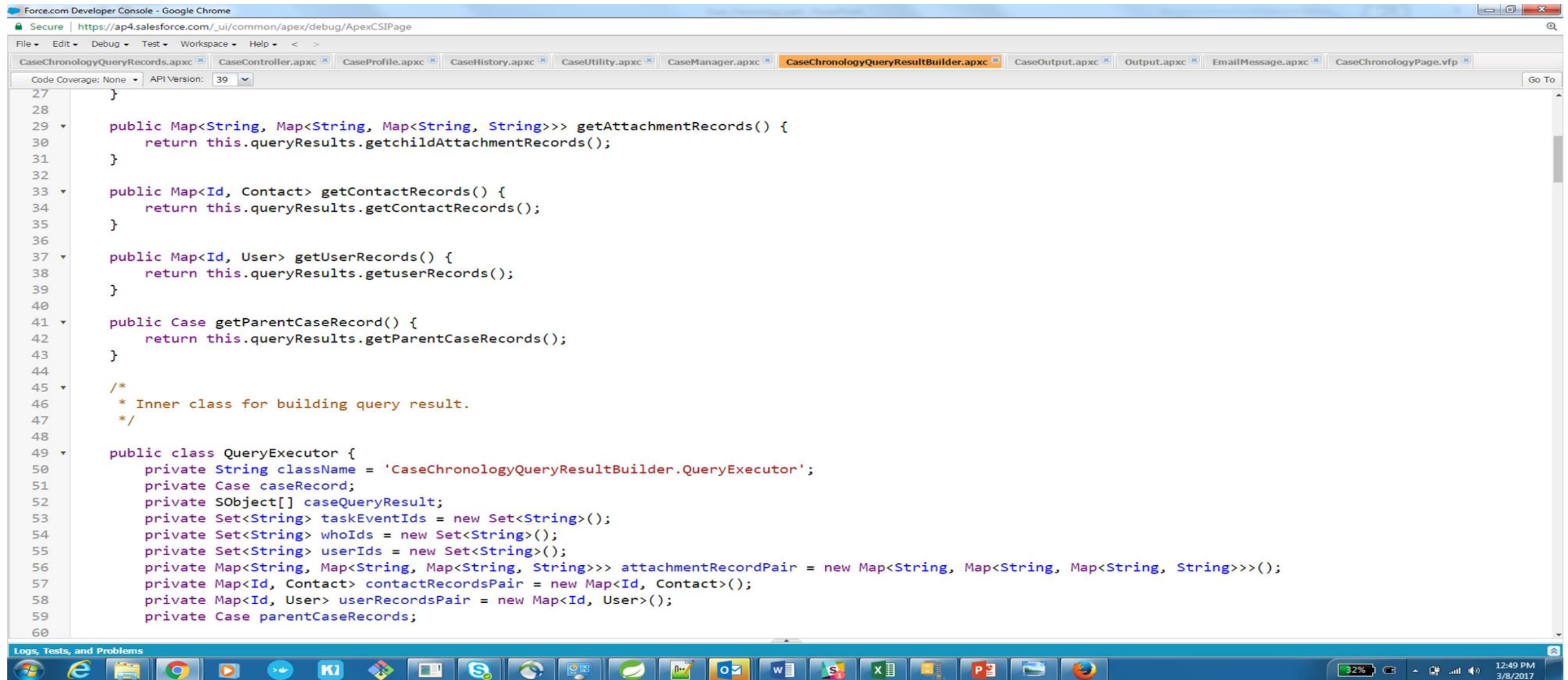
Windows Taskbar: 3:21 PM 5/12/2017

Code Base : sequence diagram

Sequence Diagram: Server Side



Code Base : server side

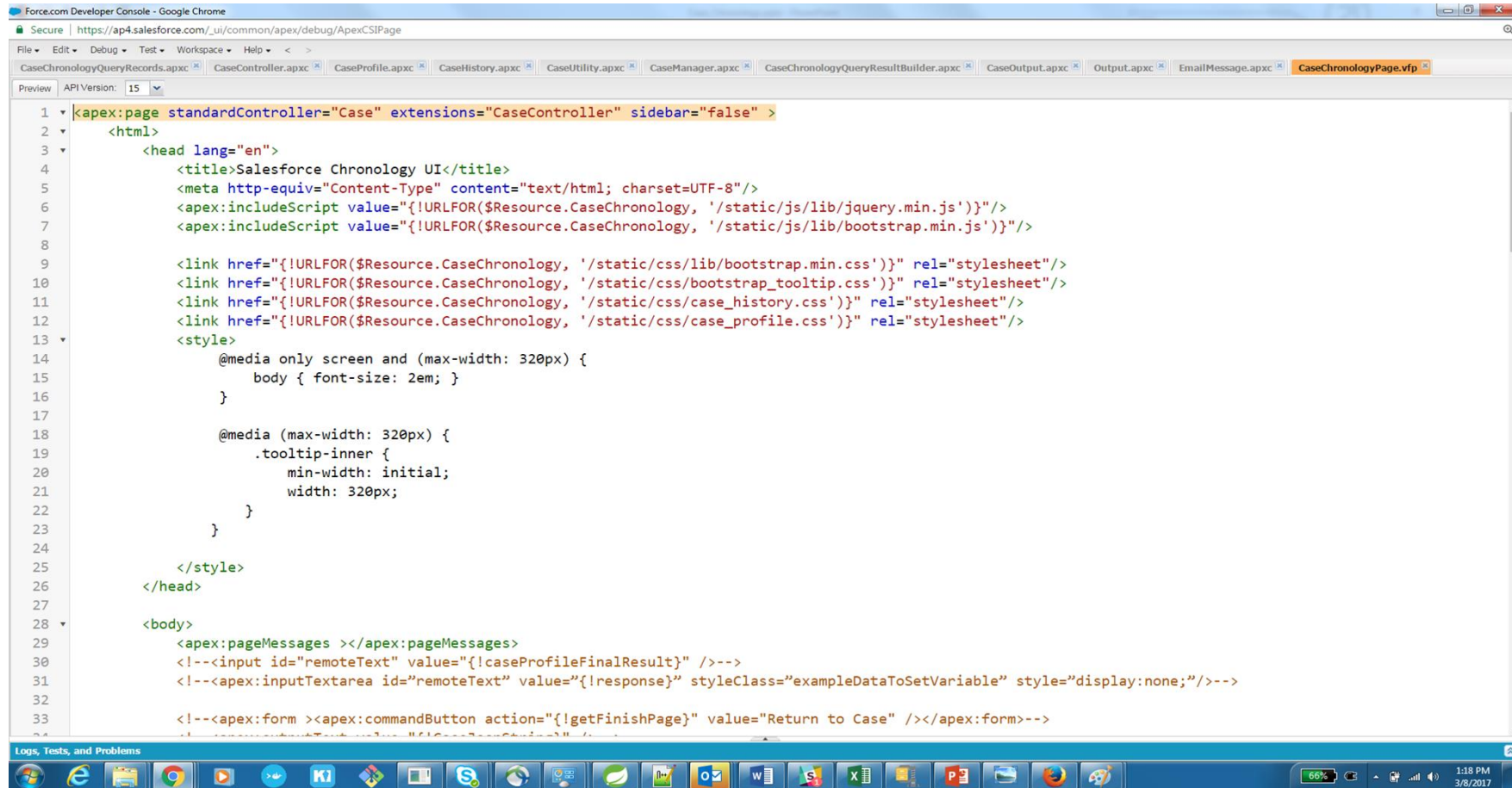


The screenshot displays the Force.com Developer Console within a Google Chrome browser window. The address bar shows the URL `https://ap4.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The console's tab bar includes several files, with `CaseChronologyQueryResultBuilder.apxc` currently selected and highlighted in orange. Below the tabs, the code editor shows the following Apex code:

```
27 }
28
29 public Map<String, Map<String, Map<String, String>>> getAttachmentRecords() {
30     return this.queryResults.getchildAttachmentRecords();
31 }
32
33 public Map<Id, Contact> getContactRecords() {
34     return this.queryResults.getContactRecords();
35 }
36
37 public Map<Id, User> getUserRecords() {
38     return this.queryResults.getUserRecords();
39 }
40
41 public Case getParentCaseRecord() {
42     return this.queryResults.getParentCaseRecords();
43 }
44
45 /*
46  * Inner class for building query result.
47  */
48
49 public class QueryExecutor {
50     private String className = 'CaseChronologyQueryResultBuilder.QueryExecutor';
51     private Case caseRecord;
52     private SObject[] caseQueryResult;
53     private Set<String> taskEventIds = new Set<String>();
54     private Set<String> whoIds = new Set<String>();
55     private Set<String> userIds = new Set<String>();
56     private Map<String, Map<String, Map<String, String>>> attachmentRecordPair = new Map<String, Map<String, Map<String, String>>>();
57     private Map<Id, Contact> contactRecordsPair = new Map<Id, Contact>();
58     private Map<Id, User> userRecordsPair = new Map<Id, User>();
59     private Case parentCaseRecords;
60 }
```

The bottom of the console features a 'Logs, Tests, and Problems' panel. The Windows taskbar at the very bottom shows various application icons and the system clock indicating 12:49 PM on 3/8/2017.

Visual force page



The screenshot displays the Force.com Developer Console in Google Chrome. The browser's address bar shows the URL `https://ap4.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The console's tab bar includes several files, with `CaseChronologyPage.vfp` selected. The left sidebar shows the 'Preview' tab with the API version set to 15. The main editor area contains the following Visualforce page code:

```
1 <apex:page standardController="Case" extensions="CaseController" sidebar="false" >
2 <html>
3   <head lang="en">
4     <title>Salesforce Chronology UI</title>
5     <meta http-equiv="Content-Type" content="text/html; charset=UTF-8"/>
6     <apex:includeScript value="{!URLFOR($Resource.CaseChronology, '/static/js/lib/jquery.min.js')}" />
7     <apex:includeScript value="{!URLFOR($Resource.CaseChronology, '/static/js/lib/bootstrap.min.js')}" />
8
9     <link href="{!URLFOR($Resource.CaseChronology, '/static/css/lib/bootstrap.min.css')}" rel="stylesheet"/>
10    <link href="{!URLFOR($Resource.CaseChronology, '/static/css/bootstrap_tooltip.css')}" rel="stylesheet"/>
11    <link href="{!URLFOR($Resource.CaseChronology, '/static/css/case_history.css')}" rel="stylesheet"/>
12    <link href="{!URLFOR($Resource.CaseChronology, '/static/css/case_profile.css')}" rel="stylesheet"/>
13    <style>
14      @media only screen and (max-width: 320px) {
15        body { font-size: 2em; }
16      }
17
18      @media (max-width: 320px) {
19        .tooltip-inner {
20          min-width: initial;
21          width: 320px;
22        }
23      }
24    </style>
25  </head>
26
27  <body>
28    <apex:pageMessages ></apex:pageMessages>
29    <!--<input id="remoteText" value="{!caseProfileFinalResult}" />-->
30    <!--<apex:inputTextArea id="remoteText" value="{!response}" styleClass="exampleDataToSetVariable" style="display:none;" />-->
31
32    <!--<apex:form ><apex:commandButton action="{!getFinishPage}" value="Return to Case" /></apex:form-->
33  </body>
34</html>
```

The bottom of the console shows the 'Logs, Tests, and Problems' tab, and the Windows taskbar at the very bottom displays various application icons and the system clock showing 1:18 PM on 3/8/2017.

Client side jquery

```
C:\Users\amohapatra\Documents\static\js\case_profile.js - Notepad++ [Administrator]
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

case_profile.js case_history.js case_profile.css case_history.css bootstrap_tooltip.css

18 if (elementObject['OwnerName'] != 'NA') {
19     var ownerTr = '';
20     if (elementObject['OwnerEmail'] != 'NA') {
21         ownerTr = ownerTr + '<tr><td>Email : </td><td>'
22             + elementObject['OwnerEmail'] + '</td></tr>';
23     }
24     if (elementObject['OwnerMobilePhone'] != 'NA') {
25         ownerTr = ownerTr + '<tr><td>Mobile : </td><td>'
26             + elementObject['OwnerMobilePhone'] + '</td></tr>';
27     }
28     if (elementObject['OwnerPhone'] != 'NA') {
29         ownerTr = ownerTr + '<tr><td>Phone : </td><td>'
30             + elementObject['OwnerPhone'] + '</td></tr>';
31     }
32
33     var tooltipStr = '<table class=customTable>' + ownerTr + '</table>';
34     var caseNum = String
35         .format(
36             '<a href="{0}" title="{1}" target="_blank" class="customTooltip">{2}</a>',
37             elementObject['OwnerId'], tooltipStr,
38             elementObject['OwnerName']);
39     tBody
40         .push('<td id=left_side_col>Case Owner : </td><td id=right_side_col><b>'
41             + caseNum + '</b></td>');
42 }
43
44 if (elementObject['Status'] != 'NA') {
45     tBody
46         .push('<td id=left_side_col>Status : </td><td id=right_side_col><b>'
47             + elementObject['Status'] + '</b></td>');
48 }
49 // *****tr1
50 // end*****
51 // *****tr2
52 // starts*****
53 // *****tr2
54 // starts*****
55 // *****tr2
56 if (elementObject['AccountName'] != 'NA') {
57     var accNum = '<a href=/' + elementObject['AccountId']
58         + ' target=_blank><b>' + elementObject['AccountName']
59         + '</b></a>';
60     tBody
61         .push('<td id=left_side_col>Account Name : </td><td id=right_side_col><b>'
62             + accNum + '</b></td>');
63 }
64
65 tBody
66     .push('<td id=left_side_col>Case Owner Role : </td><td id=right_side_col><b>'
67         + elementObject['OwnerRole'] + '</b></td>');
68 tBody
```

JavaScript file length : 15,169 lines : 338 Ln : 314 Col : 27 Sel : 0 | 0 Windows (CR LF) UTF-8 INS 64% 1:16 PM 3/8/2017

SOQL

Force.com Developer Console - Google Chrome

Secure | https://ap4.salesforce.com/_ui/common/apex/debug/ApexCSIPage

File Edit Debug Test Workspace Help < >

CaseChronologyQueryRecords.apxc CaseController.apxc CaseProfile.apxc CaseHistory.apxc CaseUtility.apxc CaseManager.apxc CaseChronologyQueryResultBuilder.apxc CaseOutput.apxc Output.apxc ErrorMessage.apxc CaseChronologyPage.vfp

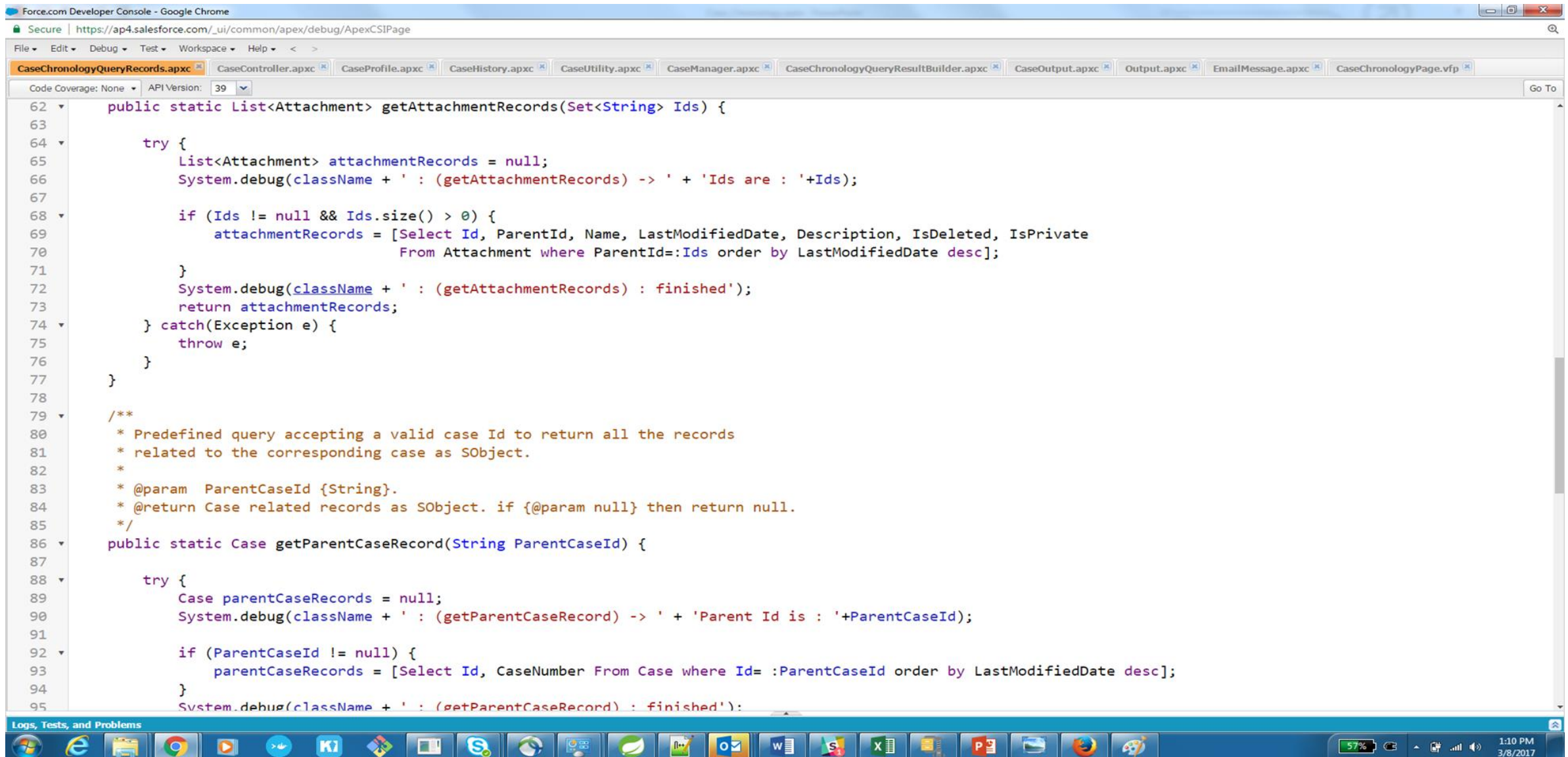
Code Coverage: None API Version: 39 Go To

```
20 public static SObject[] getCaseRecords(String caseId) {
21
22     try {
23         SObject[] caseRecords = null;
24         System.debug(className + ' : (getCaseRecords) -> ' + 'case Id is : '+caseId);
25
26         if (caseId != null) {
27             caseRecords = [Select Id, ParentId, CaseNumber, Subject, Description, AccountId, Account.Name,
28                             Type, Product__c, Reason, Potentialliability__c, Origin, OwnerId, ContactId,
29                             CreatedById, LastModifiedById, Priority, Status, IsClosed, IsDeleted, IsEscalated,
30                             SLAViolation__c, LastModifiedDate, CreatedDate, ClosedDate, EngineeringReqNumber__c,
31                             (Select Id, AccountId, Subject, ActivityDate, LastModifiedDate, Status, Description, LastModifiedById,
32                                 CreatedById, Priority, ActivityType, ActivitySubtype, OwnerId, WhoId, IsClosed, CreatedDate
33                                 From OpenActivities order by LastModifiedDate desc),
34                             (Select Id, CaseId, CreatedDate, OldValue, NewValue, CreatedById, IsDeleted, Field
35                                 From Histories order by CreatedDate desc),
36                             (Select Id, AccountId, Subject, ActivityDate, LastModifiedDate, Status, Description, LastModifiedById,
37                                 CreatedById, Priority, ActivityType, ActivitySubtype, OwnerId, WhoId, IsClosed, CreatedDate
38                                 from ActivityHistories order by LastModifiedDate desc),
39                             (Select Id, CaseId, SolutionId, CreatedDate, CreatedById, IsDeleted
40                                 From CaseSolutions order by CreatedDate desc ),
41                             (Select Id, ParentId, CommentBody, LastModifiedDate, LastModifiedById, IsDeleted, IsPublished,CreatedById,
42                                 CreatedDate, SystemModstamp From CaseComments order by LastModifiedDate desc),
43                             (Select Id, Name, LastModifiedDate, CreatedDate, LastModifiedById, CreatedById, Description,
44                                 OwnerId, IsDeleted, IsPrivate From Attachments order by LastModifiedDate desc)
45                             From Case where Id= :caseId order by LastModifiedDate desc];
46
47         }
48         return caseRecords;
49     } catch(Exception e) {
50         throw e;
51     }
52 }
```

Logs, Tests, and Problems

Windows Taskbar: 57% battery, 1:10 PM 3/8/2017

SOQL



The screenshot displays the Force.com Developer Console within a Google Chrome browser window. The address bar shows the URL `https://ap4.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The console interface includes a menu bar (File, Edit, Debug, Test, Workspace, Help), a toolbar with icons for code coverage and API version (set to 39), and a tabbed workspace. The active tab is `CaseChronologyQueryRecords.apxc`. The code editor shows the following Apex code:

```
62 public static List<Attachment> getAttachmentRecords(Set<String> Ids) {
63
64     try {
65         List<Attachment> attachmentRecords = null;
66         System.debug(className + ' : (getAttachmentRecords) -> ' + 'Ids are : '+Ids);
67
68         if (Ids != null && Ids.size() > 0) {
69             attachmentRecords = [Select Id, ParentId, Name, LastModifiedDate, Description, IsDeleted, IsPrivate
70                                 From Attachment where ParentId=:Ids order by LastModifiedDate desc];
71         }
72         System.debug(className + ' : (getAttachmentRecords) : finished');
73         return attachmentRecords;
74     } catch(Exception e) {
75         throw e;
76     }
77 }
78
79 /**
80  * Predefined query accepting a valid case Id to return all the records
81  * related to the corresponding case as SObject.
82  *
83  * @param ParentCaseId {String}.
84  * @return Case related records as SObject. if {@param null} then return null.
85  */
86 public static Case getParentCaseRecord(String ParentCaseId) {
87
88     try {
89         Case parentCaseRecords = null;
90         System.debug(className + ' : (getParentCaseRecord) -> ' + 'Parent Id is : '+ParentCaseId);
91
92         if (ParentCaseId != null) {
93             parentCaseRecords = [Select Id, CaseNumber From Case where Id= :ParentCaseId order by LastModifiedDate desc];
94         }
95         System.debug(className + ' : (getParentCaseRecord) : finished');
```

The bottom of the image shows the Windows taskbar with various application icons and a system tray indicating 57% battery, signal strength, and the time 1:10 PM on 3/8/2017.