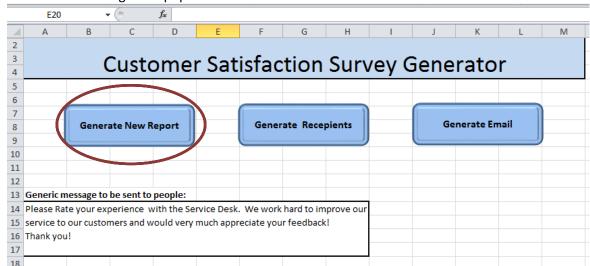
Executive Summary:

Once a week my department at work (IT department at the MTC) sends out an email to customers asking them how their experience was while working with IT in getting their problems resolved. This spreadsheet will automatically pull all ticket information for the past 7 days from JIRA (an online ticket tracking tool) and judicially pick 10 tickets / people to send an email to asking them to rate their experience. You can then send the email to the recipients right from excel!

***Note: Not all of the code is shown in this document (This would make a very long document!) If you wish to see all of the code which was used feel free to look into all of the modules within excel.



This is the Main Page that populates all of the information needed:

Clicking on the "Generate New Report" Button: Deletes the old report and pulls a new report from the web (JIRA) and puts it into a new sheet in the workbook called "general_report"

- *URL could change in the future (If it were to change just "unhide" row 1 and paste in new URL)
- *Also, this url is behind a password protected site if not on the MTC intranet since you should be on the clock and at the MTC while running this report you should not run into any problems.

```
Sub new_report()

On Error Resume Next

Application.DisplayAlerts = False
Sheets("general_report").delete

Sheets("Populator").Select
Range("A1").Select
Selection.Hyperlinks(1).Follow NewWindow:=False, AddHistory:=True

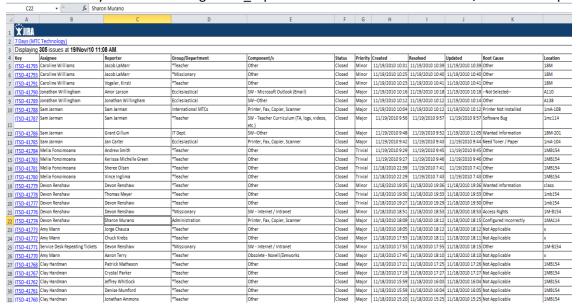
Workbooks("SearchRequest-12950").Sheets("general_report").Copy Before:=Workbooks("Customer Satisfaction Macro").Sheets(2)

Workbooks("SearchRequest-12950").Close

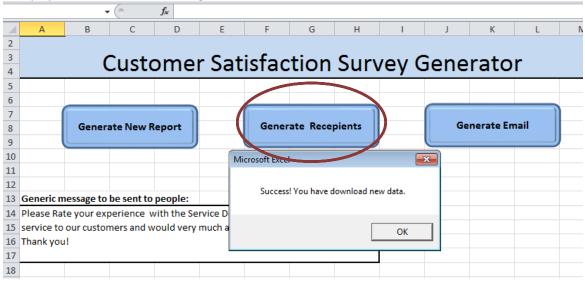
Sheets("Populator").Select
MsgBox (" Success! You have download new data. ")

End Sub
```

This is the newly created sheet "general_report" – Contains about 300 entries / tickets from past 7 days



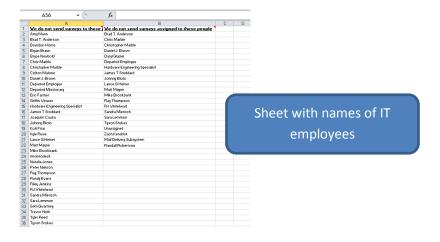
Bumps you back to the "Main Page"



Click on "Generate Recepients" Button: Filters out the tickets in the "general_report" sheet based upon certain Criteria – Marks them red then deletes them: (Screen-updating is off)

We don't want any that have any IT people as the "Reporter" – Looks at a separate sheet that contains a list of IT people to ignore and marks them.

```
'Marks IT Reporters
Selection.FormatConditions.Add Type:=xlExpression, Formula1:= _
    "=MATCH($C1,'IT Employee Lookup'!$A:$A,0)>1"
Selection.FormatConditions(Selection.FormatConditions.Count).SetFirstPriority
With Selection.FormatConditions(1).Interior
    .PatternColorIndex = xlAutomatic
    .Color = 192
    .TintAndShade = 0
End With
Selection.FormatConditions(1).StopIfTrue = False
```



We also don't want to send surveys to any missionaries:

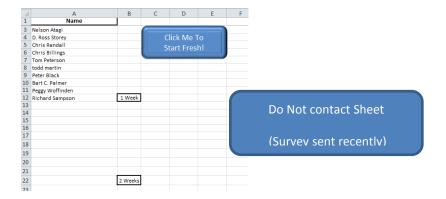
```
' Marks missionary ID #'s
Selection.FormatConditions.Add Type:=xlCellValue, Operator:=xlBetween, _
    Formula1:="=1", Formula2:="=1000000000"
Selection.FormatConditions(Selection.FormatConditions.Count).SetFirstPriority
With Selection.FormatConditions(1).Interior
    .PatternColorIndex = xlAutomatic
    .Color = 192
    .TintAndShade = 0
Selection.FormatConditions(1).StopIfTrue = False
'Marks missionaries (Sisters)
Selection.FormatConditions.Add Type:=xlTextString, String:="S.",
    TextOperator:=xlBeginsWith
Selection.FormatConditions(Selection.FormatConditions.Count).SetFirstPriority
With Selection.FormatConditions(1).Interior
    .PatternColorIndex = xlAutomatic
    .Color = 192
    .TintAndShade = 0
End With
Selection.FormatConditions(1).StopIfTrue = False
'Marks missionaries (Elders)
Selection.FormatConditions.Add Type:=xlTextString, String:="E.",
    TextOperator:=xlBeginsWith
{\tt Selection.FormatConditions(Selection.FormatConditions.Count).SetFirstPriority}
With Selection.FormatConditions(1).Interior
    .PatternColorIndex = xlAutomatic
    .Color = 192
    .TintAndShade = 0
End With
Selection.FormatConditions(1).StopIfTrue = False
```

We also only want certain employees at the service desk as the "Assignee" – Looks at a sheet that contains a list of IT people.

```
'Marks non-service desk assignees

Columns("B:B").Select
Selection.FormatConditions.Add Type:=xlExpression, Formula1:= _
    "=MATCH($B1,'IT Employee Lookup'!$B:$B,0)>1"
Selection.FormatConditions(Selection.FormatConditions.Count).SetFirstPriority
With Selection.FormatConditions(1).Interior
    .PatternColorIndex = xlAutomatic
    .Color = 192
    .TintAndShade = 0
End With
Selection.FormatConditions(1).StopIfTrue = False

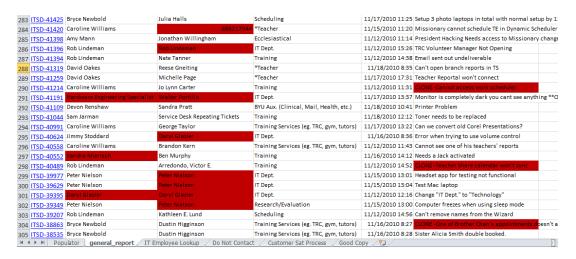
Columns("C:C").Select
```



We also don't want to contact someone if they have been contacted in the past few months (separate "do not contact" sheet or if they are "clones" / duplicates:

```
'Marks reporters on the "Do not contact list"
Selection.FormatConditions.Add Type:=xlExpression, Formula1:=
    "=MATCH($C1,'Do Not Contact'!$A:$A,0)>1"
Selection.FormatConditions(Selection.FormatConditions.Count).SetFirstPriority
With Selection. FormatConditions (1). Interior
    .PatternColorIndex = xlAutomatic
    .Color = 192
    .TintAndShade = 0
End With
Selection.FormatConditions(1).StopIfTrue = False
 ' Marks CLONES / Duplicates
Columns ("F:F") . Select
Selection.FormatConditions.Add Type:=xlTextString, String:="CLONE",
     TextOperator:=xlBeginsWith
Selection.FormatConditions(Selection.FormatConditions.Count).SetFirstPriority
With Selection.FormatConditions(1).Interior
     .PatternColorIndex = xlAutomatic
     .Color = 192
     .TintAndShade = 0
End With
Selection.FormatConditions(1).StopIfTrue = False
```

We then delete all of the unnecessary tickets by deleting all of the tickets that are marked in red:



```
' This deletes all the rows containing cells marked red
   Rows("1:1").Select
   Selection.AutoFilter
   ActiveSheet.Range("$A:$M").AutoFilter Field:=2, Criteria1:=RGB(192, 0 _
       , 0), Operator:=xlFilterCellColor
   ActiveCell.Offset(6, 0).Rows("1:1").EntireRow.Select
   Range(Selection, Selection.End(xlDown)).Select
   Range (Selection, Selection.End(xlDown)).Select
   Selection.Delete Shift:=xlUp
   ActiveCell.Offset(-6, 0).Range("A1").Select
   ActiveSheet.Range("$A:$M").AutoFilter Field:=2
   ActiveSheet.Range("$A:$M").AutoFilter Field:=3, Criteria1:=RGB(192, 0
       , 0), Operator:=xlFilterCellColor
   Range("A1").Select
   ActiveCell.Offset(1, 0).Rows("1:1").EntireRow.Select
   Range (Selection, Selection.End(xlDown)).Select
   Range (Selection, Selection.End(x1Down)).Select
   Selection.Delete Shift:=xlUp
   ActiveSheet.Range("$A:$M").AutoFilter Field:=3
   Range ("A1") . Select
   ActiveSheet.Range("$A:$M").AutoFilter Field:=5, Criteria1:=RGB(192, 0
       , 0), Operator:=xlFilterCellColor
   ActiveCell.Offset(6, 0).Rows("1:1").EntireRow.Select
   Range(Selection, Selection.End(xlDown)).Select
   Range(Selection, Selection.End(xlDown)).Select
   Selection.Delete Shift:=xlUp
   ActiveCell.Offset(-6, 0).Range("A1").Select
   ActiveSheet.Range("$A:$M").AutoFilter Field:=5
```

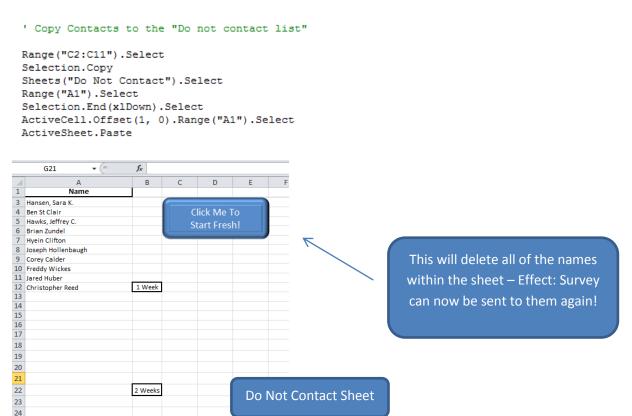
Now that we have possible tickets / recipients to send a survey to we want to randomly choose 10 tickets... We do this by assigning each on a random number then taking the 10 lowest.

```
Generates a column of random #'s

Range("G2").Select
ActiveCell.FormulaR1C1 = "=IF(NOT(ISBLANK(RC[-1])),RAND(),"""")"
Range("G2").Select
Selection.AutoFill Destination:=Range("G2:G200")
Range("G2:G200").Select
ActiveWindow.SmallScroll Down:=-6
Selection.Copy
Selection.PasteSpecial Paste:=xlPasteValues, Operation:=xlNone, SkipBlanks _
:=False, Transpose:=False
Range("H2").Select
Application.CutCopyMode = False
ActiveCell.FormulaR1C1 = ""
Range("G2").Select
```

4	А	В	С	D	E	F	G
1	Key ▼	Assignee ▼	Reporter	Group/Department 🔻	Resolved	Summary	ĵΥ
2	ITSD-41552	Amy Mann	Hansen, Sara K.	*Missionary	11/15/2010 15:59	Christmas Reception	0.00233
3	ITSD-41725	Jonathan Willingham	Ben St Clair	Training	11/18/2010 8:42	Connect a computer to a projector	0.006573
4	ITSD-41529	Caroline Williams	Hawks, Jeffrey C.	Training	11/15/2010 12:57	Part time Christmas activity	0.017135
5	ITSD-41672	Clay Hardman	Brian Zundel	*Teacher	11/17/2010 14:57	RSVP to Christmas Openhouse	0.019532
6	ITSD-41614	Clay Hardman	Hyein Clifton	*Teacher	11/16/2010 13:34	RSVP	0.023421
7	ITSD-41648	Bryce Newbold	Joseph Hollenbaugh	Training	11/17/2010 11:06	Needs printer paper	0.025417
8	ITSD-41543	Rob Lindeman	Corey Calder	*Teacher	11/15/2010 16:27	RSVP for Christmas devotional	0.027486
9	ITSD-41690	Clay Hardman	Freddy Wickes	*Teacher	11/17/2010 16:31	christmas activity	0.031773
10	ITSD-41637	Brandon Horne	Jared Huber	*Teacher	11/17/2010 8:17	Re: RSVP	0.041294
11	ITSD-41736	David Oakes	Christopher Reed	*Missionary	11/18/2010 11:39	cell phone not connecting to the server	0.047889
192							

We now have 10 random customers to send a survey to! We now copy these names over to the "Do not contact" sheet so that they won't be contacted in the future (Until that sheet is cleared)



We also need the email addresses for these individuals in order to send them an email! So part of the same sub procedure is the following code:

```
'Generates Emails for the Reporters

Call EmailCreator

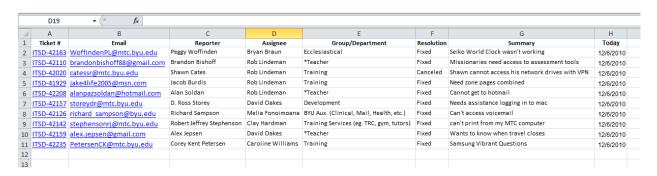
Sheets("general_report").Select
Columns("C:C").EntireColumn.AutoFit

'Message box

Sheets("Populator").Select
MsgBox (" Success! You have people to send surveys too! ")
```

```
Sub EmailCreator()
'Clicks on the Ticket Link and browses to where the email is located and pulls it down
Dim s As Worksheet
Dim r As Integer
Dim Agent1 As New agent
Dim link As String
Agent1.visible = False
Set s = Sheets("general_report")
Do Until s.Cells(r, 1).Value = ""
 Agent1.openpage "https://apps.mtc.byu.edu/jira/browse/" & s.Cells(r, 1).Value
 Agent1.position = 1
  If Agent1.moveTo("<A id=issue summary reporter") Then
   Agent1.moveTo "href="""
   Agent1.openpage "https://apps.mtc.byu.edu" & Agent1.getText("""")
    Agent1.position = 1
    Agent1.moveTo "<A href=""mailto:"
    s.Cells(r, 2).Value = Agent1.getText("""")
 Else
   MsgBox "Page format other than expected. Stopping."
   Exit Sub
 End If
 r = r + 1
Columns("B:B").EntireColumn.AutoFit
Sheets("Populator").Select
   MsgBox ("
                      Success! Created Emails
End Sub
```

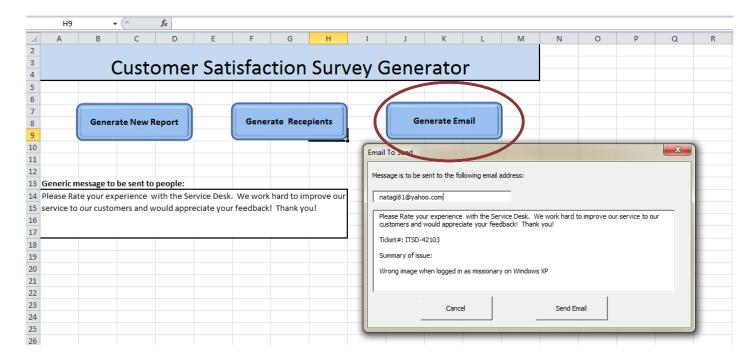
This is the new "general report" sheet after the emails have been grabbed and the columns cleaned up:



Bumps you back to the main page:

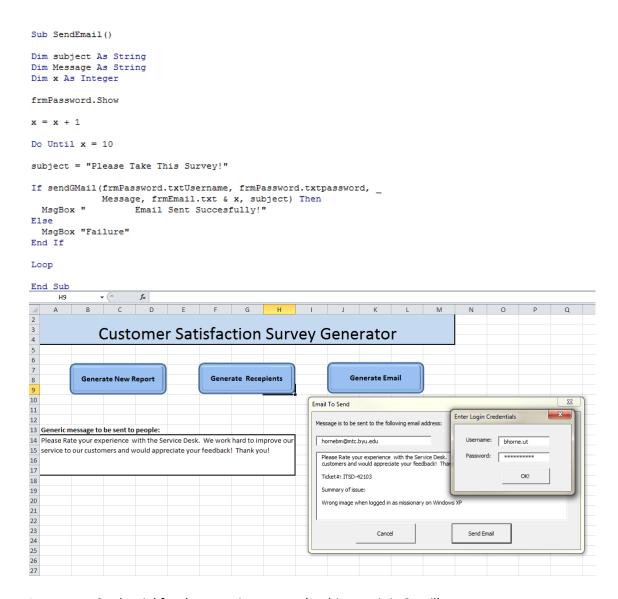


Click on "Generate Email" Button: This pulls information from the main page – "Generic Email to be sent to people" as well as pulls the email and specific Ticket number and Summary of the ticket from the "general report" sheet into a form.

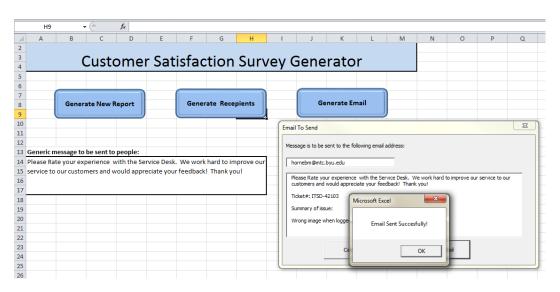


Anything can be edited in theses boxes as well if needed.

```
Sub GenerateEmail()
frmEmail.txt1 = Sheets("general_report").Range("B2").Text
frmEmail.txt2 = Sheets("general_report").Range("B3").Text
frmEmail.txt3 = Sheets("general_report").Range("B4").Text
frmEmail.txt4 = Sheets("general_report").Range("B5").Text
frmEmail.txt5 = Sheets("general_report").Range("B6").Text
frmEmail.txt6 = Sheets("general_report").Range("B7").Text
frmEmail.txt7 = Sheets("general_report").Range("B8").Text
frmEmail.txt8 = Sheets("general_report").Range("B9").Text
frmEmail.txt9 = Sheets("general report").Range("B10").Text
frmEmail.txt10 = Sheets("general report").Range("B11").Text
frmEmail.MessageBox = Sheets("Populator").Range("A14").Text & vbNewLine
& vbNewLine & "Ticket#: " & Sheets("general report").Range("A2").Text &
vbNewLine & vbNewLine & "Summary of issue: " & vbNewLine & vbNewLine &
Sheets("general report").Range("G2").Text
frmEmail.Show
End Sub
```



Input your Credential for the outgoing server: (In this case it is Gmail)



Difficulties / Learning

Difficulties started from the very beginning... When pulling in the new report it opened it up in a separate workbook instead of a new sheet within the workbook I was working in. It took me a while to get the information into the workbook I was working in without messing up any of the formatting of the data but I was able to do by simply moving the sheet from one workbook (luckily the name never changed) to another using vba.

Another problem I ran into was when I would copy the names of the recepients of the survey to the "Do not contact list". At first I wanted the program to be smart enough and after a certain number of names were in the list it would start from the beginning and replace the text with new names but I could not get it to work properly. Solution: I created a button that would clear all the names (except the last 10) by the push of a button and move the last 10 names to the top.

I ran into quite some difficulty trying to obtain the email address for the recepients that my program populated. The only link that was attached to the person ("reporter") was a link to the main ticket on the web. I needed to navigate and tell internet explorer to click on a certain link to get to the correct page that had the user's email address. I tried several things trying to "click" on the link but learned from great wisdom that another method was to "move to" a certain phrases in the url - grab the text and then use that text to either navigate to the new page or import the email into the sheet.

While working with the email I wanted to have it set up so that it would use Outlook as the outgoing mail server since we run an exchange server here and have a generic IT Service Desk email that we use. I was unable, however, to get this to work at the moment so I opted to using the gmail server for now until I can figure out if it is possible to use exchange as the outgoing server.

There were also VERY MANY errors that I ran into and it would take me forever to figure out what I was doing wrong. One I will explain breifly below:

After creating the form to which the email would be generated from I noticed that the first time I would load the form none of the information would be filled into it, however, if I closed the form and opened it a second time the information would magically be there. Solution: Through trial and error I noticed if I showed the form after I told what information was to be inside of it, it would populate correctly on the first load instead of having to close out of the form and open it again! Go Figure!

There were many other Difficult / Learning experiences as I went through this final project for this class but I'm sure that no one would want to read another page or two and I believe what I have stated above was sufficient learning for me in this class.