Sub DrillAcross()

 Dim currentRowInProcess(20) 'pointer to current row in each process

 Dim currentLowestSort(20) 'value of current lowest sort

 Dim factIndexes(20) ' for each process, column index in results where facts begin

 Worksheets("DrillAcrossResult").Cells.ClearContents

 numRowHeaderCols = Worksheets("StartHere").Cells(9, 4).Value

 numProcesses = Worksheets("StartHere").Cells(8, 4).Value

 For i = 1 To numProcesses 'sorry for the ugly code here. I couldnt figure out how to assemble a text string and then execute it.

 Select Case numRowHeaderCols

 Case 1

 Worksheets("Process" + Format(i)).Cells.Sort Key1:=Worksheets("Process" + Format(i)).Range("A1"), Order1:=xlAscending, Header:=xlYes

 Case 2

 Worksheets("Process" + Format(i)).Cells.Sort Key1:=Worksheets("Process" + Format(i)).Range("A1"), Order1:=xlAscending, Key2:=Worksheets("Process" + Format(i)).Range("B1"), Order2:=xlAscending, Header:=xlYes

 Case 3

 Worksheets("Process" + Format(i)).Cells.Sort Key1:=Worksheets("Process" + Format(i)).Range("A1"), Order1:=xlAscending, Key2:=Worksheets("Process" + Format(i)).Range("B1"), Order2:=xlAscending, Key3:=Worksheets("Process" + Format(i)).Range("C1"), Order3:=xlAscending, Header:=xlYes

 Case 4

 Worksheets("Process" + Format(i)).Cells.Sort Key1:=Worksheets("Process" + Format(i)).Range("A1"), Order1:=xlAscending, Key2:=Worksheets("Process" + Format(i)).Range("B1"), Order2:=xlAscending, Key3:=Worksheets("Process" + Format(i)).Range("C1"), Order3:=xlAscending, Key4:=Worksheets("Process" + Format(i)).Range("D1"), Order4:=xlAscending, Header:=xlYes

 Case 5

 Worksheets("Process" + Format(i)).Cells.Sort Key1:=Worksheets("Process" + Format(i)).Range("A1"), Order1:=xlAscending, Key2:=Worksheets("Process" + Format(i)).Range("B1"), Order2:=xlAscending, Key3:=Worksheets("Process" + Format(i)).Range("C1"), Order3:=xlAscending, Key4:=Worksheets("Process" + Format(i)).Range("D1"), Order4:=xlAscending, Key5:=Worksheets("Process" + Format(i)).Range("E1"), Order5:=xlAscending, Header:=xlYes

 End Select

 Next i

 CurrentOutputRow = 1

 For j = 1 To numRowHeaderCols

 Worksheets("DrillAcrossResult").Cells(1, j).Value = Worksheets("Process1").Cells(1, j).Value ' copy row headers from Process 1 to row 1 of Result

 Next j

 factcolindex = numRowHeaderCols + 1 'start marching across results fact columns, adding headings from each process n next block

 For i = 1 To numProcesses

 j = numRowHeaderCols + 1

lookformorefacts:

 factcolheader = Worksheets("Process" + Format(i)).Cells(1, j).Value

 If factcolheader <> "" Then

 Worksheets("DrillAcrossResult").Cells(1, factcolindex).Value = factcolheader

 If j = numRowHeaderCols + 1 Then

 factIndexes(i) = factcolindex ' establishes column index in results where this process's facts start

 End If

 factcolindex = factcolindex + 1

 j = j + 1

 GoTo lookformorefacts

 End If

 currentRowInProcess(i) = 2 'initialize row pointer in each process to first data row, assumes heading rows present

 If Worksheets("Process" + Format(i)).Cells(2, 1).Value = "" Then 'looks in what should be the first row of the answer set

 currentRowInProcess(i) = 0 'protects against an empty answer set

 End If

 Next i

 CurrentOutputRow = 2

 ' search all processes to find the lowest sort valued row headers

 ' skip processes where currentRowInProcess is zero (processes where all rows have been read)

 ' stop when all currentRowInProcess's are zero

 ' output all processes matching these lowest valued row headers

 ' increment currentRowInProcess for each

 ' set to zero when process has been completely read

 ' loop to beginning

grandloop:

 For i = 1 To numRowHeaderCols

 currentLowestSort(i) = "ZZZZZZ" 'initialize currentLowestSort each time we search for lowest row header values

 Next i

 finishedAllProcesses = True 'set to False below if find any remaining rows in any process

 For i = 1 To numProcesses

 For j = 1 To numRowHeaderCols

 If currentRowInProcess(i) = 0 Then

 GoTo nextProcess 'we have reached the end of this process, skip it

 End If

 finishedAllProcesses = False

 testval = Worksheets("Process" + Format(i)).Cells(currentRowInProcess(i), j) 'look at header col value in a particular process

 If testval < currentLowestSort(j) Then 'test if header col val is a minimum

 currentLowestSort(j) = testval

 For k = j + 1 To numRowHeaderCols

 currentLowestSort(k) = "ZZZZZZ" 'reinitialize the rest of the sort values

 Next k

 End If

 Next j

nextProcess:

 Next i

 If finishedAllProcesses Then

 MsgBox "Report Finished!"

 Exit Sub

 End If

 ' we now have the currentLowestSort

 ' scan all the processes with these row header values, output them, and increment their currentRowInProcess values

 For i = 1 To numRowHeaderCols

 Worksheets("DrillAcrossResult").Cells(CurrentOutputRow, i).Value = currentLowestSort(i) ' populate this row's headers

 Next i

 For i = 1 To numProcesses 'check each process to see if current row equals lowest sort

 foundlowestrowheaders = False

 If currentRowInProcess(i) = 0 Then

 GoTo keeplookingatrowheaders

 End If

 For j = 1 To numRowHeaderCols

 If Worksheets("Process" + Format(i)).Cells(currentRowInProcess(i), j).Value = currentLowestSort(j) Then

 foundlowestrowheaders = True

 If j < numRowHeaderCols Then

 GoTo keeplookingatrowheaders

 Else

 Exit For

 End If

 Else

 foundlowestrowheaders = False

 Exit For

 End If

keeplookingatrowheaders:

 Next j

 If foundlowestrowheaders Then

 j = numRowHeaderCols + 1 'column containing fact

 k = 0 ' count of columns added from this process

outputanothercolumn:

 outputval = Worksheets("Process" + Format(i)).Cells(currentRowInProcess(i), j).Value

 If outputval <> "" Then

 Worksheets("DrillAcrossResult").Cells(CurrentOutputRow, factIndexes(i) + k).Value = Worksheets("Process" + Format(i)).Cells(currentRowInProcess(i), j).Value

 j = j + 1

 k = k + 1

 GoTo outputanothercolumn

 End If

 currentRowInProcess(i) = currentRowInProcess(i) + 1

 If Worksheets("Process" + Format(i)).Cells(currentRowInProcess(i), 1).Value = "" Then ' test if finished with this process

 currentRowInProcess(i) = 0

 End If

 End If

 Next i

 CurrentOutputRow = CurrentOutputRow + 1

 GoTo grandloop

End Sub

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