**Import Database Table into Excel file**

1. Create Control Flow
   1. Scrip Task
   2. Data Flow Task
2. Display reassuring message 🡪 Edit Script 🡪 // TODO: Add your code here

MessageBox.Show("About to import data...");

1. Connect two and double click Data Flow Task icon

Graphical user interface, application

Description automatically generated with medium confidence

1. Go to Data Flow
   1. Connect to the database using Connection ManagersGraphical user interface, application, Word

      Description automatically generatedGraphical user interface, text, application, email

      Description automatically generated
   2. From Other Sources: drag **OLEDB Source**, Edit icon, connect to the table
   3. At the Connection Managers 🡪 Right Click 🡪 New Connection 🡪 Choose Excel Connection -> set location to save file and give file name
   4. From Other Destinations: drag **Excel Destination**
   5. Connect Blue Arrow
   6. Edit Excel Destination: Name of the Excel sheets 🡪 Click New… 🡪 OK
2. Go to Control Flow 🡪 Execute Package

**Import flatfile into Database file(each time run, add to new data)**

1. Right click on Connection Managers: **New Flat Files Connection**
2. Create Control Flow: Drag **Data Flow Task**
3. Go to Data Flow
   1. From Other Sources: **Flat Files Source**, Edit; Error Output: Ignore failure; and OK
4. Create Connection Managers

Graphical user interface, application, Word

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

1. Create database source
   1. From Other Destination: drag **OLE DB Destination**
   2. Drag Blue Arrow
   3. Edit OLE DB Destination; choose table you want; connect in Mappings
2. Execute Package
3. Back to Control Flow: **Execute SQL task**

Text

Description automatically generated

* 1. Edit Execute SQL task
  2. Connection: add database
  3. SQLStatement: delete from apps

**Transformation(sort, aggregate, sample, combine)**

1. Create Connection Managers
2. Create Control Flow: Drag **Data Flow Task**
3. Create Data Flow: Drag **Excel Source** and **OLE DB Destination**
4. Connect excel file and database; Blue Arrow line

**Diagram

Description automatically generated with medium confidence**

1. Add **Sort;** Edit;Select **Gender, Winner, Series**

**Diagram

Description automatically generated**

1. Add **Aggregate;** Edit;Select **Gender** and **Series**;Operation Series by **Count;**

**Graphical user interface

Description automatically generated**

1. Add **Union All**; Right Click on Arrow; Enable **Data Viewer**

**A screenshot of a computer

Description automatically generated with low confidence**

1. Add **Row Sampling;** Number of rows:**3,** change the output names(**selected rows, unselected rows**)
2. Add two **Union All**; Enable Data viewer

Diagram

Description automatically generated

1. Add **Percentage Sampling** instead

Diagram

Description automatically generated

1. Combine two excel files: Males and Females

A picture containing diagram

Description automatically generated

**Variables (create variables; rowcount transformation; display in c#; display in visual basic)**

1. Add **Data Flow Task** & **Script Task**
2. Add **Excel Source** in **Data Flow**
3. Click **Variables** button; Add **Variable** button; Name:NumberRows; Datatype:Int32

****

**Graphical user interface, text, application

Description automatically generated**

1. Add **Row Count;** Variable:select **NumberRows**

**Diagram

Description automatically generated**

1. Edit **Scrip Task;**

Table

Description automatically generated

* 1. **Edit Script:** MessageBox.Show("There are " + Dts.Variables["NumberRows"].Value + " rows");

**Data Types and data conversion transformation**

1. **Excel source** and **OLE DB Destination**

**Diagram

Description automatically generated with medium confidence**

**Reason for the error: “CourseName” cannot convert between Unicode and non-unicode string data**

1. Add **Data Conversion; Output Alias, Data type, Length** change

**Graphical user interface

Description automatically generated**

1. Edit **OLE DB Destination**; Mappings; Input Column**: Course Name 🡪 ShorterCourseName**

**Table

Description automatically generatedTable

Description automatically generatedTable

Description automatically generated**

**Always setting**

**Right click on Project name 🡪 Properties 🡪 Configuration Properties 🡪 Debugging 🡪 Run64BitRuntime : FALSE**

**Expressions**

1. Add **variable 🡪 New variable 🡪** Name: CurrentDate, DataType: DateTime **🡪** Add **Expression** 
   1. Find the function under Date/Time
   2. Drag onto Expression
   3. Check Evaluate Expression

**Graphical user interface, text, application

Description automatically generated**

1. Add **variable 🡪 New variable 🡪** Name: CurrentYear, DataType: Int32 **🡪** Add **Expression**

**Graphical user interface, text, application

Description automatically generated**

* 1. Under **Date/Time Function 🡪** Drag **Year** function to the Expression **🡪** Add **User::CurrentDate** inside

1. Add more variables
   1. **(DT\_WSTR, 4)@[User::CurrentYear] +"-12-25"**
   2. **(DT\_DBTIMESTAMP) @[User::XmasDateText]**
   3. **DATEDIFF( "d",@[User::CurrentDate] , @[User::XmasDate] )**

**Conditional Split and Derived Column**

1. Check conditional Split

**Diagram

Description automatically generated**

1. Conditional Split
   1. **Conditional Split**
      1. **Cheryl Cole finalists; FINDSTRING(UPPER(Mentor),"CHERYL",1) > 0**
      2. **Tulisa finalists; LEFT(LOWER(Mentor),6) == "tulisa"**
   2. **Derived Column**
      1. Drived Column Name: **NewMentor;**
      2. Derived Column: **add as new column;**
      3. Expression: **(DT\_WSTR,255)REPLACE(Mentor,"Cole","Wakefield")**
   3. **Union All**
      1. **Input2: Mentor 🡪 NewMentor**

**Diagram

Description automatically generated**

**Debugging**

1. **Using breakpoint**
   1. Right click on **Control Flow**
   2. Set Breakpoint
2. Debug 🡪 Windows 🡪 Immediate

**Lookup**

**Sequence Containers & For loops**

1. **Sequence Containers?**
   1. **Normally we cannot make two Data Flow Task with the same name. We cannot get the two Variables with the same name**
      1. **If we assign the Data Flow Task/Variable to each Sequence, it is allow**
   2. **If you want to finish other steps before the final**

**Graphical user interface, application

Description automatically generated**

1. **For loop container?**
   1. **Count from 1 to 10**
      1. **Add variable I, value=0**
      2. **Background pattern

         Description automatically generated with medium confidence**
      3. 
   2. **If this is prime, add to list**
      1. **Script Task**
         1. **Add three variables**

**Graphical user interface, text, application

Description automatically generated**

* + - 1. **Edit For loop container**

**Table

Description automatically generated**

* + - 1. **Edit Another Script Task**

****