Here is a project where I would receive company staff personal details and their shift patterns and needed to import into SQL as customer only had this data stored in Excel. Each company would email it in different formats and wanted as much historical data in SQL before they started to use SQL. This is only a fraction of what my spreadsheet did and often they wanted historical holidays booked, emergency contacts and mapping all staff to all the departments and jobtitles. This soon became a very tasking job with no pattern to how companies stored their data. I wrote this so I could populate it with staff details and just the start time and endtime and it will calculate everything for the start and end time then script 99% of the data needed for the customer to get started.

Note that something highlight in blue allowed you to adjust any differences between companies needs and the rest is auto populated with data that SQL needed using the shift start and end time.

1st I only need the Shift name, Start time and the Endtime. The rest is calculated automatically and can be adjusted for different type of shifts staff can work. Note each stage then writes the script to insert it into SQL. Note this worksheet has many columns hidden for the picture.

A screenshot of a computer

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Now using vlookup I can match Shift name and start the break range to be 1 hours after start time and set the amount lunch break depending on each company.

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Now I use the start time to create the grace period which allows staff to be late and the database will rewind to the start time so staff do not lose few minutes of pay. The Grace Min is adjustable and any where you see light grey can be adjusted for each company

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Now using offset I can set the shift to pay Rate 2 (overtime) before and after the core hours of work should that be required.

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Again, by offsetting the shifts worksheet I can create 3 rules for each shift and calculate the Holiday amount for abstype 1 (full day), 2 (AM half day) and 3 )PM half day)

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Now I create the schedule that will house all the shifts from Monday to Sunday. The shift name is reused to create the schedule name. I have included the script writing excel cell in this picture.

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Now in most cases staff do not work on the weekend so have a row that put the shift in the schedule between Monday and Friday and marks Weekends as day off using the code -214…. If the day off column is changed it will change the data and the script.

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Now some companies round any clock In or Out from work to the nearest 15 minutes.

Using =Mod and anchored to how many times I want it to loop using value in S1. I can then use this on other scripts that increment following this cycle pattern.

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Now map it the groupref of the schedule so each schedule has it own rounding group as will vary depending on the start and end time so Roundings needs to know the core hours. Note at this point I have dark yellow which also vlookups and display name. Even though I am not scripting I prefer to see this so I am certain what is scripted to each shift.

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Now I insert the staff details. This data is not shown for data protection and only needs the scripting in the data. Here is the formula used to create the SQL script.

Note at the end of the formula must trigger the primary key of the SQL table as Primary Key is stored in a sequence table and prevents any data inserts if simply try insert script.

="insert into empdetails([empref],[payrollno],[cardno],[rfcardid],[surname],[forenames],[initials],[scheduleref],[siteref],[costcenterref],[deptref],[jobpostref],[assPointref],[supervisor],[email],[validfrom],[validTo],[HolEntGroupRef]) values ('"&A395&"','"&B395&"','"&C395&"','"&D395&"','"&E395&"','"&F395&"','"&G395&"','"&H395&"','"&I395&"','"&J395&"','"&K395&"','"&L395&"','"&M395&"','"&N395&"','"&O395&"','"&TEXT(P395,"yyyy-mm-dd")&"','"&TEXT(Q395,"yyyy-mm-dd")&"','"&R395&"')exec @id=dbo.nextval 'empdetails.empref'"