

ClockWork — Labor, Sound, Time

Collect Data

1. find a consumer product on the Consumer Price Index in the Database of Average Price Data, download the spreadsheet, and open it. Top picks will suffice if you're not feeling creative: www.bls.gov/cpi/data.htm
2. find a profession on the Bureau of Labor Statistics "Wage Data by Area and Occupation" and write the name and hourly wage on your spreadsheet below all the other data: www.bls.gov/bls/blswage.htm

Adjust Data

1. pick a twelve-month period and create a new row called "Hours of labor" under where you wrote the name and hourly wage. The formula is to divide each cost cell with the hourly wage, e.g. `=B17/B23`
2. in the next cell down, write "Minimum" and put a formula next to it that calculates the minimum amount of labor, e.g. `=MIN(B24:M24)`
3. below that, write "Maximum" and put a formula next to it that calculates the maximum amount of labor, e.g. `MAX(B24:M24)`
4. further down, write "Range" and put a formula next to it that calculates the range of values by subtracting the minimum from the maximum, e.g. `B25-B26`
5. next, write "Scaled to 38-96" in the cell below and put in the formula that subtracts the minimum from the cell, multiplies by 58 (96-38), divides that by the "Range" above, and adds 38, e.g. `=(B24 - B26)*(96 - 38)/B27 + 38`
6. another row, write "Rounded 38 - 96 Scale" and put a formula in that rounds the values about to the nearest whole number, e.g. `=ROUND(B28,0)`
7. below, write "Scaled to 0.2 to 3" and put a formula in that subtracts the minimum from the cell, multiples by 2.8, divides that by the "Range" above, and adds 0.2, e.g. `=(B24-B26)*2.8/B27 + 0.2`
8. lastly, write "Rounded number of hours" and put a formula in that that rounds the number of hours for each month, e.g. `=ROUND(B24,0)`

Play Data

1. open ClockWork.scd in SuperCollider and execute the lines until you get to `// play the wage-pitch synth`
2. replace the numbers below the line `//use the values of "Rounded 38-96 scale" here` with the values from the spreadsheet in "Rounded 38-96 scale"
3. replace the numbers below the line `//use the values of "Scaled to 0.2 to 3" here` with the values from the spreadsheet in "Scaled to 0.2 to 3"
4. play the wage-pitch synth
5. in the beep-count synth, put a number from your list of "Rounded number of hours" into the first `Synth` after the `\repeat`. Ask your neighbor for one of their values to put in the second `Synth` after that `\repeat`
6. play the beep-count synth

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