

Excel – Recitation 11 (YAY. NO MORE JAVASCRIPT!)

Introducing the Excel Environment:

- a) Cell pointer: use arrow keys
- b) Menu bar: home, layout, etc.
- c) Edit line: textbox used to type formulas and text (View -> Formula bar)
- d) Standard toolbar: new sheet, save, print, etc. (View -> Toolbars -> Standard)
- e) Formatting toolbar: change font family, size, style, text alignment, etc. (View -> Toolbars -> Formatting)
- f) Column and row heading buttons: Horizontal: A, B, C, D, E, F...; Vertical: 1, 2, 3, 4, 5... (Click to select entire row/column; drag to select multiple rows/columns)
- g) Selecting cells: Ctrl selects individual cells; Shift selects a range of cells
- h) Tab scrolling buttons: navigating through many worksheets
- i) Sheet tabs
- j) Status bar (informational): below tabs
- k) Office assistant: search for help

Workbook/Worksheet

-Worksheet: a single spreadsheet that contains cells organized by rows and columns

-Workbook: a file that contains one or more worksheets

-To start a new sheet: Ctrl + N OR File -> Template -> Open

Entering Data

-Select cell

-Type value in cell or in edit line

-Double click to edit

-Ctrl + Z to undo

-Ctrl + Y to redo

-Auto-fill

-Consecutive dates, numbers, days, months, etc.

-Type the first 2 values in series, select and drag to auto-fill

-Auto-fill a range

-Select a range, type something in the first cell, Ctrl + Enter fills selected range with value in that first cell

-Select a range, start typing + Enter: cell selector moves automatically

-Select a range, start typing + Shift + Enter: fills range in reverse order

-Exercise: try these with a 3x3 block!

Calculations with Formulas and Built in Functions (+, -, *, /)

- a) Formulas must start with the = sign, otherwise they are treated as data
- b) Can use Insert -> Function (not allowed on the Excel Exam)
- c) Referencing cells in formulas
 - Commas for single cells (C1, C5)
 - Colon for range of cells (A1:A8)

- Relative referencing: cell references are updated automatically if you copy or auto-fill formulas
- Absolute referencing: references remain fixed when copied (\$A\$18)
- Mixed referencing (\$A1)
- Formulas get updated automatically if any of their cells change
- d) Sum function, Auto Sum: selects cells below column to auto sum
- e) Copying formulas: click and drag lower right corner of cell to auto-fill
- f) Average function
- g) To display formulas and **not** values (Tools -> Options -> Display formulas)

Formatting and Structure

- a) Inserting rows, columns, cells, deleting
- b) Resize columns (#### in a cell means the cell is too small to display the value, so resize the column)
- c) Format content and borders of cells (Format -> Cells)
- d) Header/footer – custom header/footer (View -> Header/Footer)

Exercise:

- a) Download Example1.xlsx
- b) Enter title “Example 1” in cell B2
- c) Now edit the title to say “Example 1- Payroll Statement”
- d) Enter months starting with January and use auto-fill
- e) Auto-fill overtime to \$3200
- f) Enter and auto-fill Mortgage Payment formula: $(B5+C5+D5)*\text{Mortgage rate}$
 - a. Try using relative referencing: incorrect results
 - b. Try absolute referencing on mortgage rate: correct result!
- g) Enter and auto-fill Pension Fund formula: $(\text{Salary} + \text{Overtime}) * 25\%$
- h) Total Deductions: Mortgage Payment + Pension Fund, then auto-fill
- i) Total Pay: insert SUM function using function wizard: SUM(B5:D5) (you can either type the range or click and drag)
- j) Do column totals using the Auto Sum
- k) Insert Net Pay column heading in cell I4
- l) Fill in Net Pay column with the formula: Total Pay – Total Deductions
- m) Compute column total for Column I
- n) Add the label Average in cell G16
 - a. Add average function to compute average total pay in cell H16
 - b. Add average function to compute average total net pay in cell I16
- o) Copy worksheet: Right click on tab, use move/copy
 - a. Rename sheets: 1) Main, 2) Formulas
 - b. Display formulas in Formulas sheet
- p) Add header/footer (custom made): name, date, and auto page number
- q) Format cells as percentage and currency as appropriate
- r) Format title (Bold, centered, etc.)

****Reminder: FOR THE FIRST ASSIGNMENT, DO NOT USE BUILT IN FUNCTIONS! (No SUM, no AVERAGE, etc.)**