CS 105 SPRING 2017 MIDTERM REVIEW

YOUR HOST FOR THE EVENING: PAIGE RICHARDSON

SOME COMPUTER BASICS

ALGORITHM - - -> CPU - - -> RAM - - -> DATA

ALGORITHM: INSTRUCTIONS, DIRECTS THE CPU ON HOW TO ACT/BEHAVE/PROCESS/ETC.

DATA: STORED, THE FILES ON YOUR LAPTOP, "STOMACH"

MAIN MEMORY = RAM: "BRAIN"

CPU = CENTRAL PROCESSING UNIT; RECEIVES THE ALGORITHM

SOME PROGRAMMING BASICS

EXPRESSION	STATEMENT	VARIABLE
2 + 2	PRINT("PIZZA")	P = "PIZZA"

**NOTE THAT A VARIABLE IS A FORM OF A STATEMENT

OUR FUNCTIONS FOR TODAY

- COUNTIFS
- INDEX
- INDEX/MATCH
- MATCH - - ONLY FUNCTION HERE THAT RETURNS AN INDEX NUMBER, NOT A VALUE
- MAX/MIN
- SUMIFS
- VLOOKUP

REVIEWING VLOOKUP

=VLOOKUP(VALUE YOU WANT TO LOOK UP, RANGE WHERE YOU WANT TO LOOKUP THE VALUE, THE COLUMN NUMBER IN THE RANGE CONTAINING THE RETURN VALUE, EXACT MATCH OR APPROXIMATE MATCH – INDICATED AS 0/FALSE OR 1/TRUE)

REVIEWING INDEX/MATCH

= INDEX (LOOKUP RANGE, MATCH(VALUE YOU

WANT TO LOOKUP, RANGE WHERE LOOKUP

VALUE IS CONTAINED, MATCH TYPE)

VLOOKUP VS. INDEX/MATCH

IS THE VALUE YOU'RE SEARCHING FOR(DO NOT HAVE YET) TO THE *RIGHT* OF THE COLUMN WHERE YOUR LOOKUP VALUE IS LOCATED?

VLOOKUP

--GIVEN AN ENTIRE ARRAY (OR 'SPAN OF COLUMNS')

--MUST COUNT COLUMNS

IS THE VALUE YOU'RE SEARCHING FOR ON THE *LEFT* HAND SIDE OF YOUR KNOWN VARIABLE?

INDEX/MATCH

--ONLY GIVEN 2 COLUMNS

ALWAYS FORGET WHICH COMES FIRST, INDEX OR MATCH?

JUST THINK BACK TO THOSE ABC'S YOU LEARNED IN PRE-SCHOOL/KINDERGARTEN

I COMES *BEFORE* M

REMEMBERING THE DIFFERENCE BETWEEN:
TRUE VS. FALSE
0 VS.1

JUST KEEP IN MY MIND, IT IS OPPOSITE OF WHAT YOU

WOULD USUALLY ASSUME

Other helpful items:

? - - to replace exactly one character

* - - to replace sequence of characters

$ - - lock values

DISCLAIMER:

JUST BECAUSE IT WAS NOT COVERED HERE, DOES NOT MEAN IT WILL NOT APPEAR ON THE MIDTERM.

MY TIP: STUDY EVERYTHING

OUR DATASETS FOR TODAY:

FROM CMS OPEN PAYMENTS

ALL PHYSICIANS ARE FROM ILLINOIS, SOME LICENSED IN DIFFERENT STATES

NOTE: WHEN RETURNING A DATE, THE RETURN VALUE MAY BE UNEXPECTED (I.E. A VERY LONG NUMBER), JUST

CHANGE THE CELL WHERE YOUR FORMULA IS TO "SHORT DATE" AND THAT SHOULD SOLVE THE PROBLEM!