**Help with the Logic for the “Library Book” Problem**

Dr. Yue Zhang “Jeff”

In the “Library Book” problem in Excel HW #3, the logic of the business process can be stated as follows:

IF the book has been returned (i.e., if there is a date returned), then

 Comparing the date returned with the date due and determine whether or not it is late;

ELSE Using TODAY to see as of today whether it is late.

Do we all agree with the above logic? If so, let’s go one step more detailed:

(1) IF there is a date returned

*(how would we say that in spreadsheet formula? You figure it out – hint: we’ve seen that in the LADWP demo question when determining whether account # is entered, and whether phone number is enterd – go back to take a look at that demo question),*

(2) THEN (means: there’s a date returned)

 (2.1) IF date returned is \_\_(you figure out)\_\_ date due, “Late”, ELSE “Not late”,

(3) ELSE (means: there’s NOT a date returned)

 [EXACTLY SAME logic as above “(2.1)”, YET since there’s no date returned, we’ll use TODAY

function in place of date returned]

 (3.1) IF \_(?)\_ is \_\_(you figure out)\_\_ date due, “Late”, ELSE “Not late”

[\*\*Of course: you must take care of the levels and the correspondence of parentheses]

Another way to put it:

|  |  |
| --- | --- |
| IF there is a date returned (you figure out, using the way in LADWP demo question (how did we say “account is entered”, “phone is entered”?)THEN (if the answer is “Y”)ELSE (answer is “N”) |  (2.1) IF date returned is \_\_(you figure out)\_\_ date due, THEN “Late”, ELSE “Not late” |
|  (3.1) IF \_\_\_(?)\_\_\_\_ is \_\_(you figure out)\_\_ date due, THEN “Late”, ELSE “Not late”  |  **SAME** structure, only need to …… replace “date returned” with the TODAY function, since there’s NO “date returned” now, and we use the TODAY function to estimate the status of lateness (late or not late) as of today. |

Same structure, only that one uses DRet and the other TODAY function

Then, for the “fine determination” part, similarly:

IF there is a date returned (DRet for short),

THEN, (2.1) IF “Not Late”, No fine, ELSE calculate fine using date returned (you know how);

ELSE (means: no DRet)

 (3.1) IF “Not Late”, No fine, ELSE calculate fine using TODAY function (you know how);