

ChatGPT o1 Preview - Problem 2

Using this dataset

Index,HrActionID,ProcessStepID,ProcessStepCompletionDate,DaysBtwSteps,Problem2 Brian

```
1,1,1000,2017-11-27 00:00:00,1,1
2,1,1010,2018-03-14 00:00:00,107,107
3,1,1020,2018-04-25 00:00:00,42,42
4,1,1030,2018-04-25 00:00:00,0,0
5,1,1040,2018-04-25 00:00:00,0,0
6,1,1050,2018-04-25 00:00:00,0,0
7,1,1060,2018-05-01 00:00:00,6,6
8,1,1070,2018-05-18 00:00:00,17,17
9,1,1080,2018-06-26 00:00:00,39,39
10,1,1090,2018-07-03 00:00:00,7,7
11,1,1100,2018-11-08 00:00:00,128,128
12,2,1000,2019-01-11 00:00:00,1,1
13,2,1010,2019-01-31 00:00:00,20,20
14,2,1020,2019-03-21 00:00:00,49,49
15,2,1030,2019-03-21 00:00:00,0,0
16,2,1040,2019-05-03 00:00:00,43,43
17,2,1050,2019-05-04 00:00:00,1,1
18,2,1060,2019-05-09 00:00:00,5,5
19,2,1070,2019-05-23 00:00:00,14,14
```

Write a DAX measure to calculate the days between each process step for each HR action. If a step is the first one within its HR Action, it gets a duration of 1 day, otherwise it's the number of days between the completion of a given process step and the previous step. After the first one, steps completed on the same day get a value of 0

For actions that have no completion date, the measure should just return a null value

Here's a DAX measure that calculates the days between each process step for each HR action, following your specified rules:

```
DAX

DaysBetweenSteps =
VAR currentHrActionID = SELECTEDVALUE(TableName[HrActionID])
VAR currentCompletionDate = SELECTEDVALUE(TableName[ProcessStepCompletionDate])
VAR currentProcessStepID = SELECTEDVALUE(TableName[ProcessStepID])

RETURN
IF(
    ISBLANK(currentCompletionDate),
    BLANK(),
    VAR previousStepCompletionDate =
        MAXX(
            FILTER(
                ALL(TableName),
                TableName[HrActionID] = currentHrActionID
                && TableName[ProcessStepCompletionDate] <= currentCompletionDate
                && TableName[ProcessStepID] < currentProcessStepID
            ),
            TableName[ProcessStepCompletionDate]
        )
    VAR firstCompletionDate =
        MINX(
            FILTER(
                ALL(TableName),
                TableName[HrActionID] = currentHrActionID
            ),
            TableName[ProcessStepCompletionDate]
        )
    VAR firstProcessStepID =
        MINX(
            FILTER(
                ALL(TableName),
                TableName[HrActionID] = currentHrActionID
                && TableName[ProcessStepCompletionDate] = firstCompletionDate
            ),
            TableName[ProcessStepID]
        )
    RETURN
    IF(
        currentCompletionDate = firstCompletionDate
        && currentProcessStepID = firstProcessStepID,
        1,
        IF(
            ISBLANK(previousStepCompletionDate),
            0,
            VAR daysBetween = DATEDIFF(previousStepCompletionDate, currentCompletionDate, DAY)
            RETURN
            daysBetween
        )
    )
)
```

Explanation:

Variables Defined:

- **currentHrActionID:** The HR Action ID of the current step.
- **currentCompletionDate:** The completion date of the current step.
- **currentProcessStepID:** The Process Step ID of the current step.

- **Logic Implemented:**
 - Checks if `ProcessStepCompletionDate` is blank and returns `BLANK()` if true.
 - Finds the `previousStepCompletionDate` by looking for the maximum completion date less than or equal to the current date and with a lower `ProcessStepID` within the same `HRActionID`.
 - Determines the `FirstCompletionDate` and `FirstProcessStepID` to identify the first step within each HR Action.
 - Applies the rules:
 - If it's the first step, returns 1.
 - If there is no previous date (due to same date and step), returns 0.
 - Otherwise, calculates the days between the `previousStepCompletionDate` and the `currentCompletionDate`.

This measure ensures that:

- The first step within each HR Action gets a duration of 1.
- Steps completed on the same day after the first one get a value of 0.
- For steps with no completion date, it returns a null value.

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