



# Azure Data Factory Real Time Scenario Part - 31

## Check Whether Particular Date is Working Day or Weekend

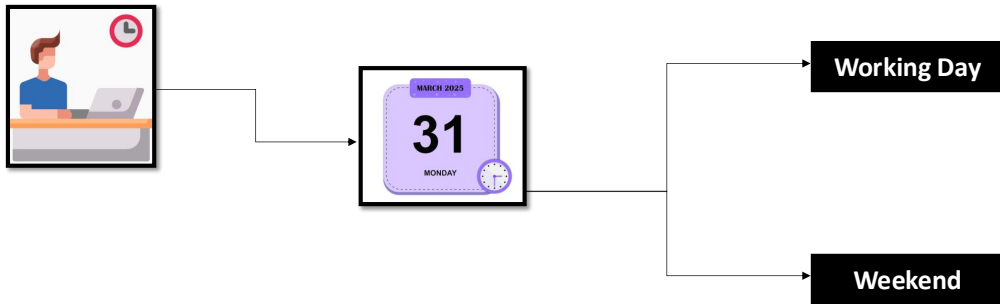
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## Business Requirement

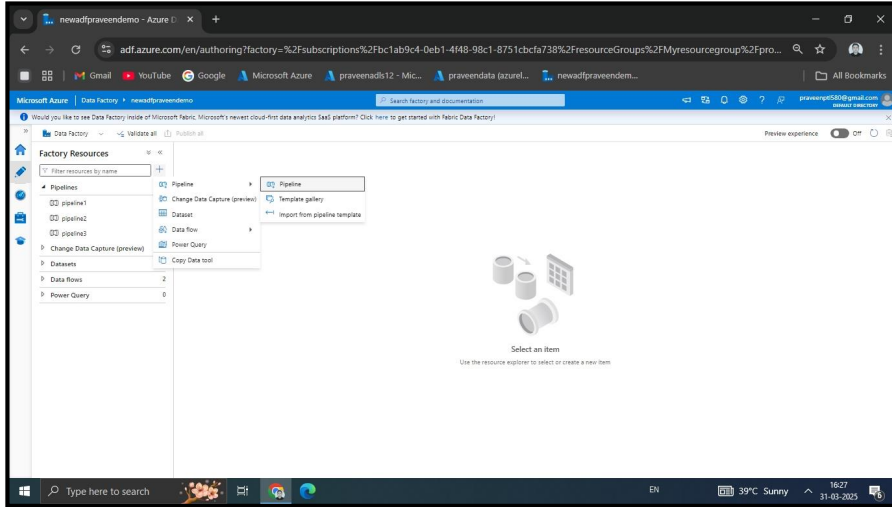
Suppose, You are an Azure Data Engineer at ABC company where you are having responsibility to build data pipeline. One day, A product manager comes to you to assign a business requirement to carry out, while assigning a business requirement he says you have to find out either working day or weekend based on passing parameter as any particular date by user.



# Practical Demonstration

## Step 1

Open Azure Data Factory then go to author tab click on '+' icon and create a new pipeline.



## Step 2

Go to parameters create a new parameter EnterDate to pass date dynamically.

The screenshot shows the Microsoft Azure Data Factory portal interface. The browser address bar displays the URL: [adf.azure.com/en/authoring/pipeline/pipeline4?factory=%2Fsubscriptions%2Fbc1ab9c4-0eb1-4f48-98c1-8751cbcf738%2FresourceGroups%2FMyres...](https://adf.azure.com/en/authoring/pipeline/pipeline4?factory=%2Fsubscriptions%2Fbc1ab9c4-0eb1-4f48-98c1-8751cbcf738%2FresourceGroups%2FMyres...). The page title is "newadpraveendemo - Azure". The main content area shows the "pipeline4" configuration. The "Parameters" tab is selected, displaying a table with the following data:

Name	Type	Default value
EnterDate	String	Value

The left sidebar shows the "Factory Resources" tree with "pipeline4" selected. The top navigation bar includes "Data Factory", "Validate all", and "Publish all" buttons. The right sidebar shows the "Properties" tab with fields for "Name" (pipeline4) and "Description".

## Step 3

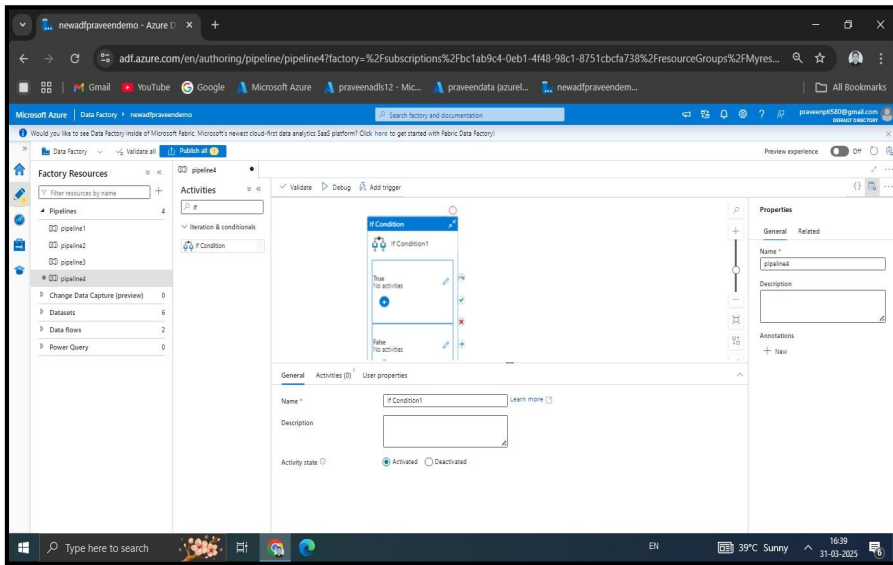
Next go to variables create a new variable WorkingDay and Weekend to use in set variable activity.

The screenshot shows the Microsoft Azure Data Factory portal interface. The browser address bar displays the URL: `adf.azure.com/en/authoring/pipeline/pipeline4?factory=%2Fsubscriptions%2Fbc1ab9c4-0eb1-4f48-98c1-8751bcfa738%2FresourceGroups%2FMyres...`. The interface includes a left-hand navigation pane with 'Factory Resources' and 'Activities' sections. The 'Activities' section is expanded, showing a list of activities including 'Move and transform', 'Synapse', 'Azure Data Explorer', 'Azure Function', 'Batch Service', 'Dataflows', 'Data Lake Analytics', 'General', 'HDInsight', 'Iteration & conditionals', 'Machine Learning', and 'Power Query'. The 'Variables' tab is selected, displaying a table with columns for 'Name', 'Type', and 'Default value'. The table contains three rows: 'Name' (checkbox), 'WorkingDay' (String), and 'Weekend' (String). The 'Default value' column shows 'Value' for each row. The 'Properties' pane on the right shows the 'General' tab with fields for 'Name' (pipeline4) and 'Description'.

Name	Type	Default value
<input type="checkbox"/>	String	Value
<input type="checkbox"/>	String	Value
<input type="checkbox"/>	String	Value

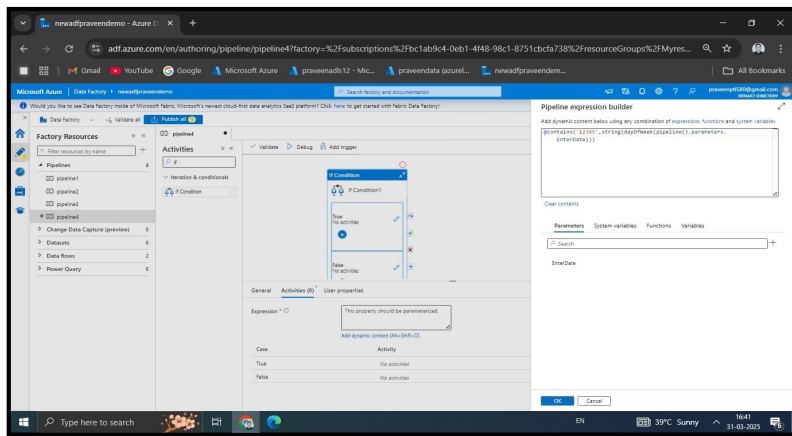
## Step 4

Go to activity search bar search if condition activity in activity search bar select,drag and drop it.



## Step 5

Go to if condition activities then go to expression add dynamic content provide the following expression in the expression builder it will ensure if particular date passed by user contains either 1 or 2 or 3 or 4 or 5 in that case if returns true otherwise false. Here, 1 represent monday, 2 represents tuesday like that 5 represents friday and 6 represents saturday. A dayofweek function takes date as parameter and returns a day in the form of 0,1,2,3,4,5.



## Step 6

Next click on true case pencil to add set variable activity.

The screenshot displays the Microsoft Azure Data Factory portal interface. The browser address bar shows the URL: `adf.azure.com/en/authoring/pipeline/pipeline4?factory=%2Fsubscriptions%2Fbc1ab9c4-0eb1-4f48-98c1-8751cbca738%2FresourceGroups%2FMysres...`. The interface includes a left-hand navigation pane with 'Factory Resources' and a list of pipelines (pipeline1, pipeline2, pipeline3, pipeline4). The main workspace shows the 'Activities' tab for 'pipeline4', with an 'if Condition' activity selected. The 'if Condition' activity is configured with a condition 'if Condition1'. The 'True' branch is currently empty, and the 'False' branch is labeled 'No activities'. The 'Properties' pane on the right shows the 'Name' as 'pipeline4' and the 'Description' as an empty text box. The 'User properties' section at the bottom shows the expression '@contains('12345',string(dayOfWeek...))' and a table with 'True' and 'False' cases, both currently set to 'No activities'.

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Factory Resources

- Pipelines
- pipeline1
- pipeline2
- pipeline3
- pipeline4
  - Change Data Capture (preview) 0
  - Datasets 6
  - Data flows 2
  - Power Query 0

Activities

- if
- Iteration & conditionals
- if Condition

if Condition

if Condition1

True

No activities

False

No activities

Properties

General

Name \*

pipeline4

Description

Annotations

+ New

General

Activities (0)

User properties

Expression

@contains('12345',string(dayOfWeek...))

Case

Activity

True

No activities

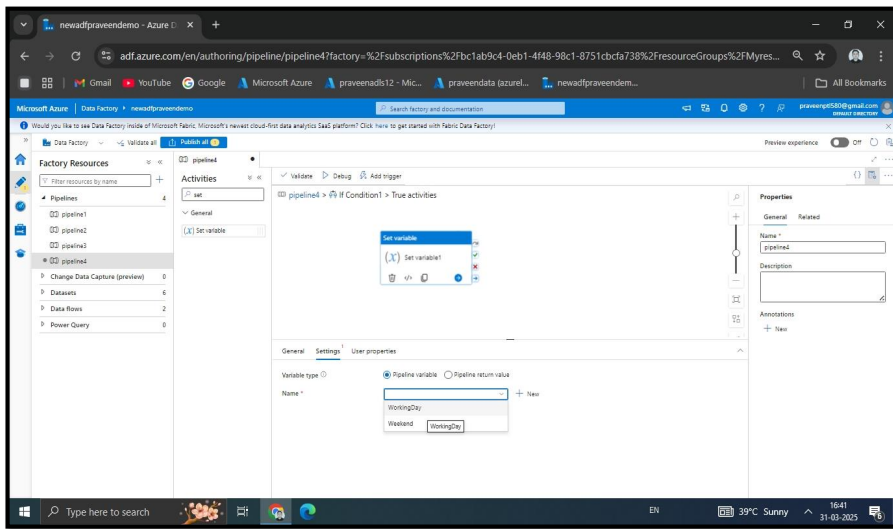
False

No activities



## Step 7

Go to activity search bar search set variable activity in activity search bar select, drag and drop it next to settings select variable WorkingDay.



## Step 8

Next go to value add dynamic content provide the following expression in the expression builder.

The screenshot shows the Microsoft Azure Data Factory Pipeline Expression Builder interface. The left sidebar displays the 'Factory Resources' tree with 'pipelines' expanded, showing 'pipeline4' selected. The main canvas shows the 'Set variable' activity configuration for 'pipeline4'. The 'Variable type' is set to 'Pipeline variable', and the 'Name' is 'WorkingDay'. The 'Value' field is empty, and the 'Add dynamic content (Alt+DnF+D)' button is visible. The right sidebar shows the 'Pipeline expression builder' with a text area containing the expression: `@concat(pipeline().parameters.EnterDate, ' ', 'is working day')`. Below the text area are tabs for 'Parameters', 'System variables', 'Functions', and 'Variables'. The 'Parameters' tab is active, showing a search bar and the parameter 'EnterDate'.

## Step 9

Next click on false case pencil to add set variable activity.

The screenshot displays the Microsoft Azure Data Factory portal interface. The browser address bar shows the URL: `adf.azure.com/en/authoring/pipeline/pipeline4?factory=%2Fsubscriptions%2Fbc1ab9c4-0eb1-4f48-98c1-8751cbcf738%2FresourceGroups%2FMyres...`. The page title is "Microsoft Azure | Data Factory | newadpraveendemo".

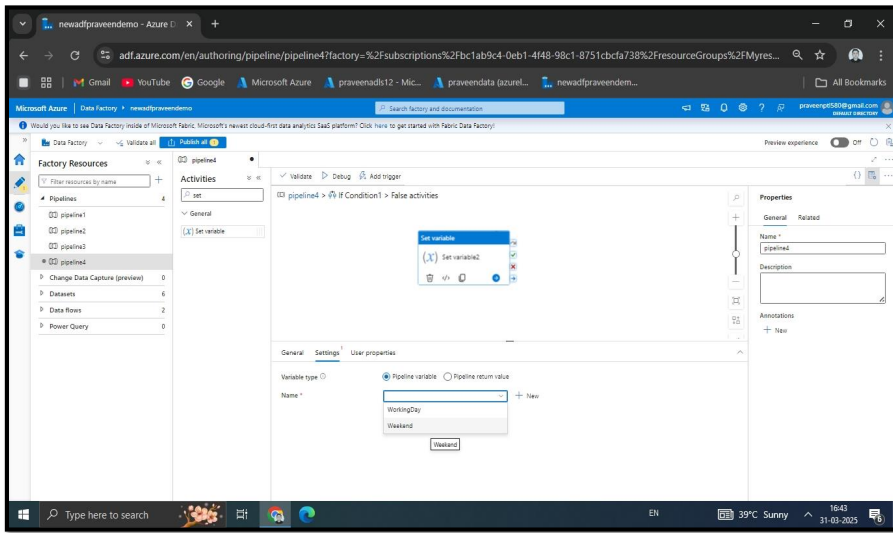
The interface is divided into several sections:

- Factory Resources:** A sidebar on the left showing a list of resources. Under "Pipelines", there are four items: "pipeline1", "pipeline2", "pipeline3", and "pipeline4". "pipeline4" is selected and highlighted.
- Activities:** A section in the middle-left showing the available activities for the selected pipeline. The "set" activity is visible.
- Visual Designer:** The main workspace shows a visual representation of the pipeline. It features a "If Condition1" activity with two branches: "True" and "False". The "True" branch contains a "Set variable1" activity. The "False" branch is currently empty, and a pencil icon is visible next to it, indicating it can be edited.
- Properties:** A panel on the right showing the properties of the selected activity. The "Name" field is set to "pipeline4".
- Activities (1):** A section at the bottom showing the configuration for the selected activity. The "Expression" field is set to `@contains('12345', string(dayOfWeek...))`. The "Case" section shows two rows: "True" with the activity "Set variable1" and "False" with "No activities".

The Windows taskbar at the bottom shows the system clock as 16:42 on 31-03-2025, and the weather as 39°C Sunny.

## Step 10

Go to activity search bar search set variable activity in activity search bar select, drag and drop it next go to settings select variable Weekend.



## Step 11

Next go to value add dynamic content provide the following expression in the expression builder.

The screenshot shows the Microsoft Azure Data Factory Pipeline Expression Builder interface. The browser address bar displays the URL: `adf.azure.com/en/authoring/pipeline/pipeline4?factory=%2Fsubscriptions%2Fbc1ab9c4-0eb1-4f48-98c1-8751cbcf738%2FresourceGroups%2FMyres...`. The interface is divided into several sections:

- Factory Resources:** A sidebar on the left showing a tree view of resources including Pipelines (pipeline1, pipeline2, pipeline3, pipeline4), Change Data Capture (preview), Datasets, Data flows, and Power Query.
- Activities:** A central pane showing the 'Set variable' activity. A 'Set variable' dialog box is open, showing 'Set variable2' as the variable name and a text input field for the value.
- Pipeline expression builder:** A pane on the right titled 'Pipeline expression builder' with the instruction 'Add dynamic content below using any combination of expressions, functions and system variables.' The expression field contains the code: `@concat(pipeline().parameters.EnterDate, ' ', 'is weekend')`. Below the expression field are tabs for 'Parameters', 'System variables', 'Functions', and 'Variables', and a search bar.
- Settings:** At the bottom, the 'Settings' tab is active, showing 'Variable type' set to 'Pipeline variable', 'Name' as 'Weekend', and a 'Value' field with a dynamic content icon.

The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray information including 'EN', '39°C Sunny', and the date '16:43 31-03-2025'.

## Step 12

Now execute pipeline using debug mode provide date as of your choice i entered today's date with format yyyy-MM-dd to check whether it is working day or weekend.

The screenshot displays the Microsoft Fabric Data Factory interface. On the left, the 'Factory Resources' pane shows a list of pipelines, with 'pipeline4' selected. The main canvas shows the configuration for 'pipeline4', including an 'Activities' pane with a 'Set variable' activity and a visual representation of an 'If Condition' activity. The 'If Condition' activity is configured with a condition 'if Condition1' and two paths: 'True' leading to 'Set variable1' and 'False' leading to another 'Set variable1' activity. The 'Pipeline run' pane on the right shows the 'Parameters' section with a table:

Name	Type	Value
EnterDate	string	2025-03-01

At the bottom of the 'Pipeline run' pane, there are 'OK' and 'Cancel' buttons. The Windows taskbar at the bottom shows the system clock as 16:44 on 31-03-2025.

## Step 13

After pipeline is executed successfully go to set variable output icon you will be able to see today is working day.

The screenshot displays the Microsoft Azure Data Factory portal interface. The browser address bar shows the URL: `adf.azure.com/en/authoring/pipeline/pipeline4?factory=%2Fsubscriptions%2Fbc1ab9c4-0eb1-4148-98c1-8751cbfa738%2FresourceGroups%2FMyres...`. The left sidebar shows the 'Factory Resources' tree with 'pipeline4' selected. The main canvas displays the pipeline design for 'pipeline4', which includes an 'If Condition' activity followed by a 'Set variable' activity. The 'Set variable' activity is configured with the variable name 'WorkingDay' and the value '2025-03-31 is working day'. The 'Output' pane shows the JSON output of the 'Set variable' activity: 

```
{
  "name": "WorkingDay",
  "value": "2025-03-31 is working day"
}
```

. The 'Pipeline status' section indicates that the pipeline has 'Succeeded'. Below this, a table shows the execution details for the activities:

Activity	Status	Run start	Duration	Integration runtime
Set variable1	Succeeded	3/31/2025, 4:44:56 PM	Less than 1s	
If Condition1	Succeeded	3/31/2025, 4:44:56 PM	2s	

The bottom of the screen shows the Windows taskbar with the search bar and system tray indicating the date and time as 16:45 on 31-03-2025.

## Step 14

Once again i executed pipeline using debug mode and entered different date to check whether is weekday or weekend.

The screenshot displays the Microsoft Azure Data Factory portal interface. The left sidebar shows the 'Factory Resources' tree with 'pipelines' expanded, listing 'pipeline1', 'pipeline2', 'pipeline3', and 'pipeline4'. The main canvas shows the 'Activities' tab for 'pipeline4', which includes a 'Set variable' activity and an 'If Condition' activity. The 'If Condition' activity is configured with 'If Condition1' and has two paths: 'True' leading to 'Set variable1' and 'False' leading to another 'Set variable1' activity. The 'Pipeline run' panel on the right shows the 'Parameters' tab with a single parameter 'EnterDate' of type 'string' and value '2025-03-30'. Below this, the 'Pipeline status' is shown as 'Succeeded'. The 'Output' tab displays a table with the following data:

Activity name	Activity status	Activity name	Run start	Duration
Set variable1	Succeeded	Set variable	3/31/2025, 4:44:58 PM	Less than 1s
If Condition1	Succeeded	If Condition	3/31/2025, 4:44:58 PM	2s

The bottom of the screen shows the Windows taskbar with the search bar, task view button, and system tray displaying the date and time as 16:45 on 31-03-2025.



## Step 15

After pipeline execution when I went to set variable output icon i was able to see it was weekend on 30th march 2025.

The screenshot displays the Azure Data Factory portal interface. On the left, the 'Factory Resources' pane shows a list of pipelines, with 'pipeline4' selected. The 'Activities' pane for 'pipeline4' shows a 'Set variable' activity. The main canvas shows the 'Set variable' activity configuration, with a pop-up window displaying the output: 'name': 'Weekend', 'value': '2025-03-30 is weekend'. The 'Pipeline status' is 'Succeeded'. The bottom status bar shows the date as 31-03-2025.

Activity	Status	Run start	Duration	Integration runtime
Set variable2	Succeeded	3/31/2025, 4:45:47 PM	Less than 1s	
If Condition1	Succeeded	3/31/2025, 4:45:48 PM	0s	



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