

**ACCU
2021**
VIRTUAL EVENT

Bloomberg
Engineering

undo

 **mosaic**
CONSULTANTS TO FINANCIAL SERVICES

Example Mapping: A Structured, Collaborative Discovery Technique

Seb Rose

Example mapping

- a structured, collaborative discovery technique

Seb Rose

Twitter: @sebrose

Blog: <https://cucumber.io/blog/>

E-mail: seb.rose@smartbear.com

Requirements

Have
you thought
about ...

Give me an
example.

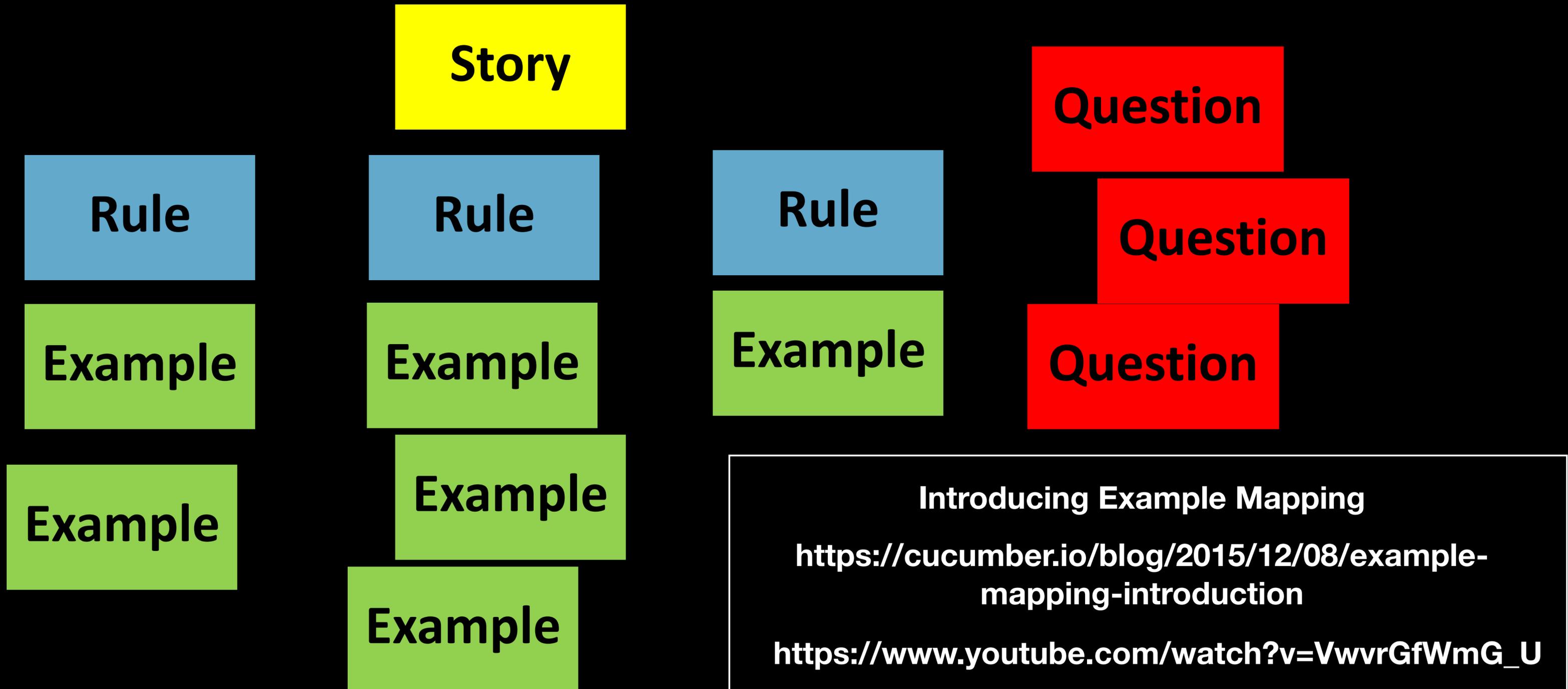
Is that
always true?

Requirements

Is there
something else
that needs to
happen?

What would
happen if ... ?

Example map



Synonyms

Rule

Synonyms

Requirement

Rule

Synonyms

Requirement

Rule

**Acceptance
criterion**

A sample rule

Only library members are permitted to reserve items

Reserving a book at the library

At the library, it's free to take out books that are on the shelves, but there is a charge of £1.00 if you want to reserve an item that's currently out on loan.

Reserving a book at the library

At the library, it's free to take out books that are on the shelves, but there is a charge of £1.00 if you want to reserve an item that's currently out on loan.

Apply reservation charges to library members

Members pay a reservation charge of £1

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Apply reservation charges to library members

Members pay a reservation charge of £1 *per item*

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**Andrew reserves two books
He is charged ~~£1~~ £2**

Reserving a book at the library

At the library, it's free to take out books that are on the shelves, but there is a charge of £1.00 if you want to reserve an item that's currently out on loan.

Is there a limit to the number of books that can be reserved?

Apply reservation charges to library members

Members pay a reservation charge of £1 per item

Andrew reserves a book
He is charged £1

Andrew reserves two books
He is charged ~~£1~~ £2

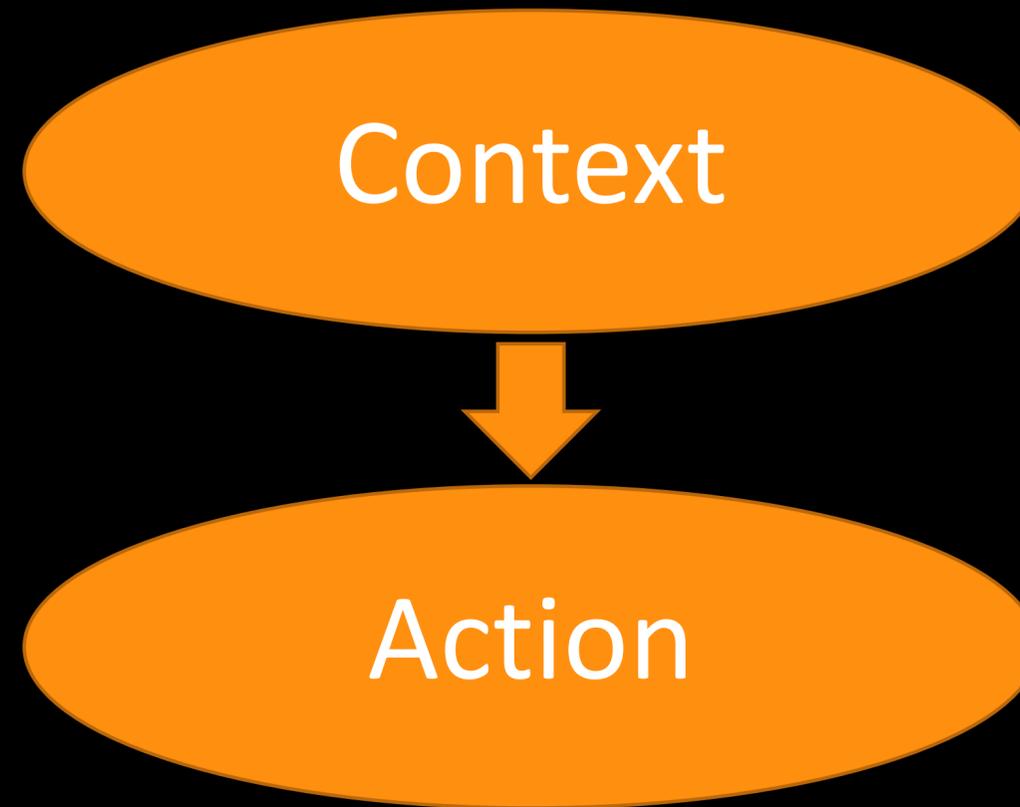
Anatomy of an example

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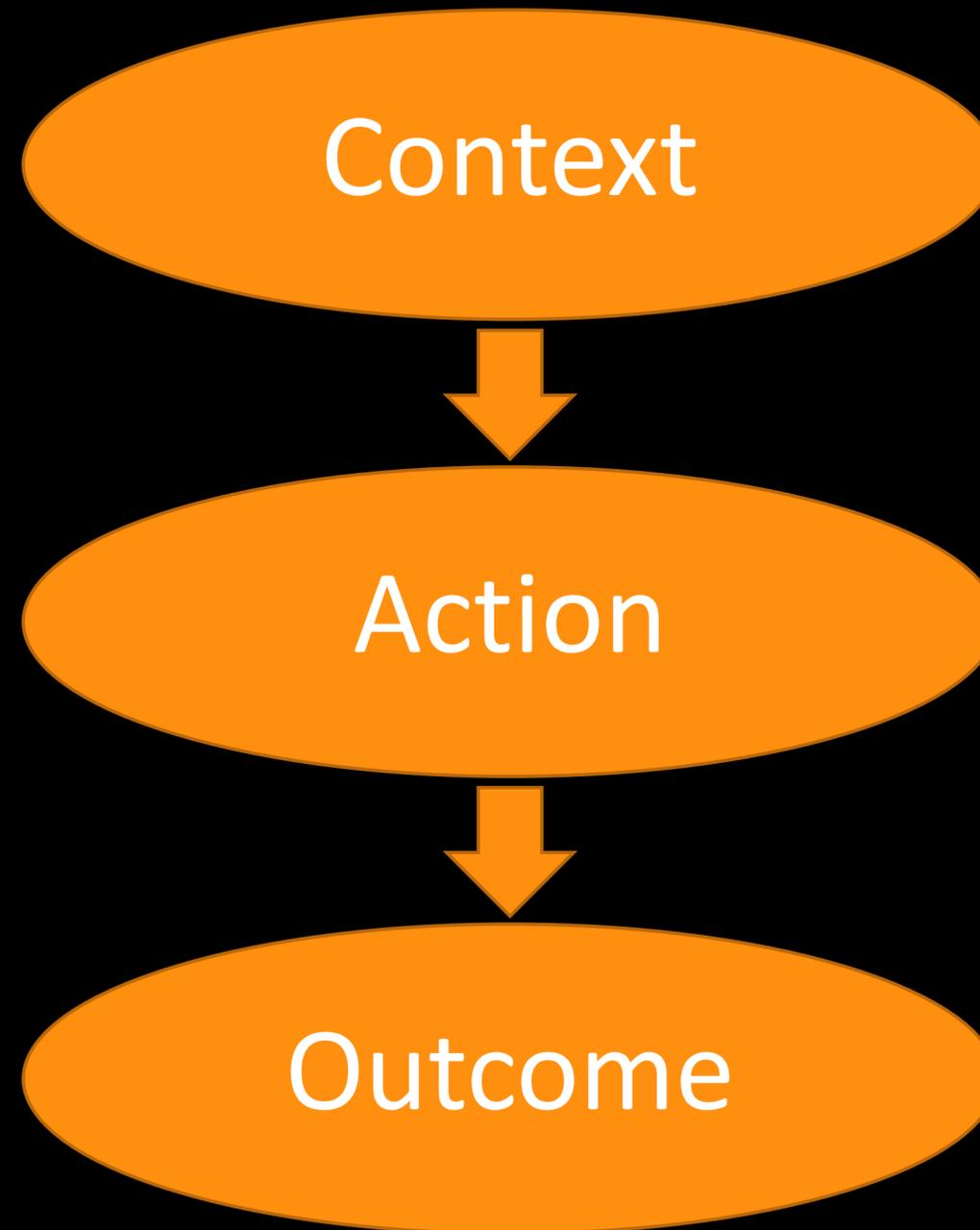


Context

Anatomy of an example

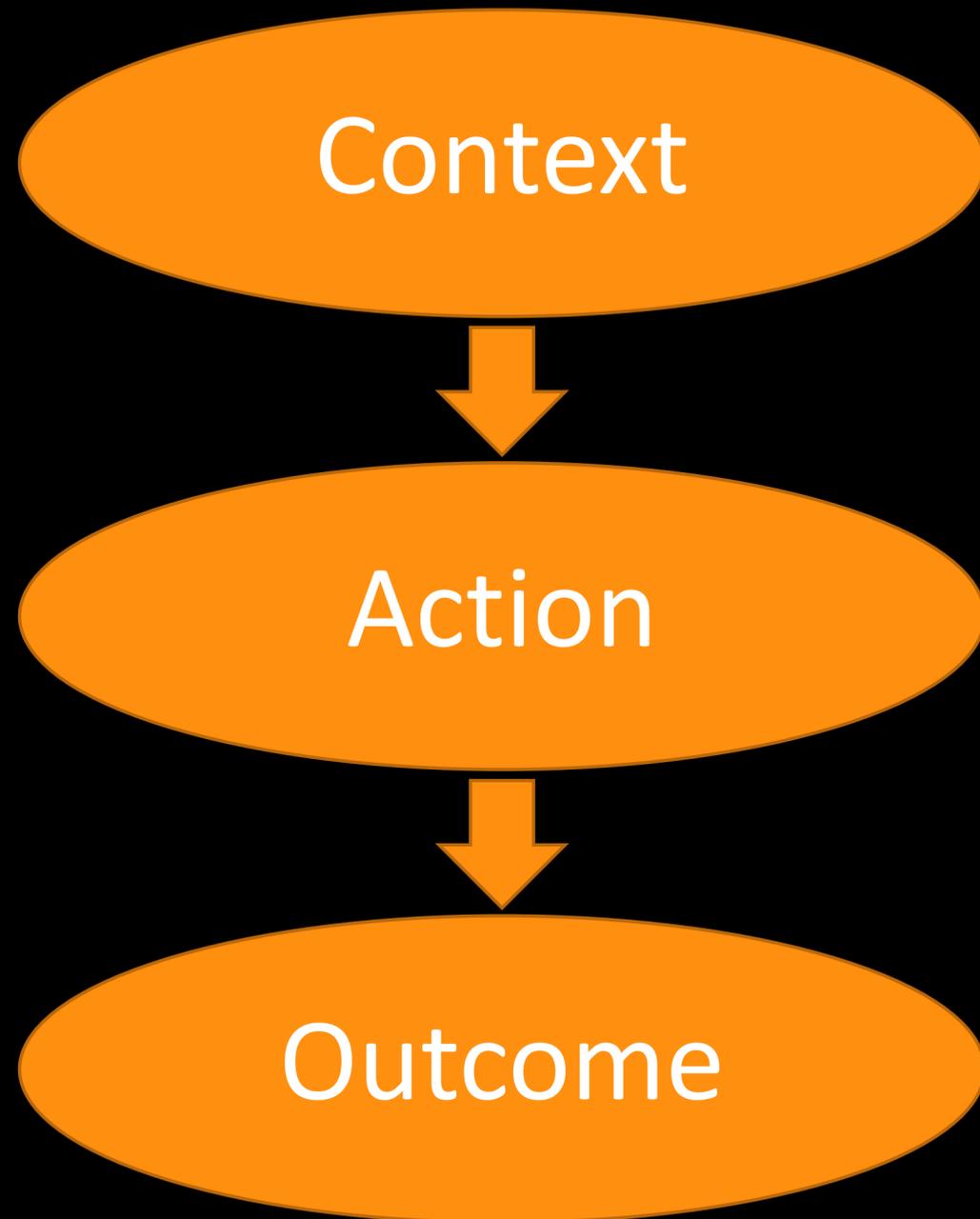


Anatomy of an example

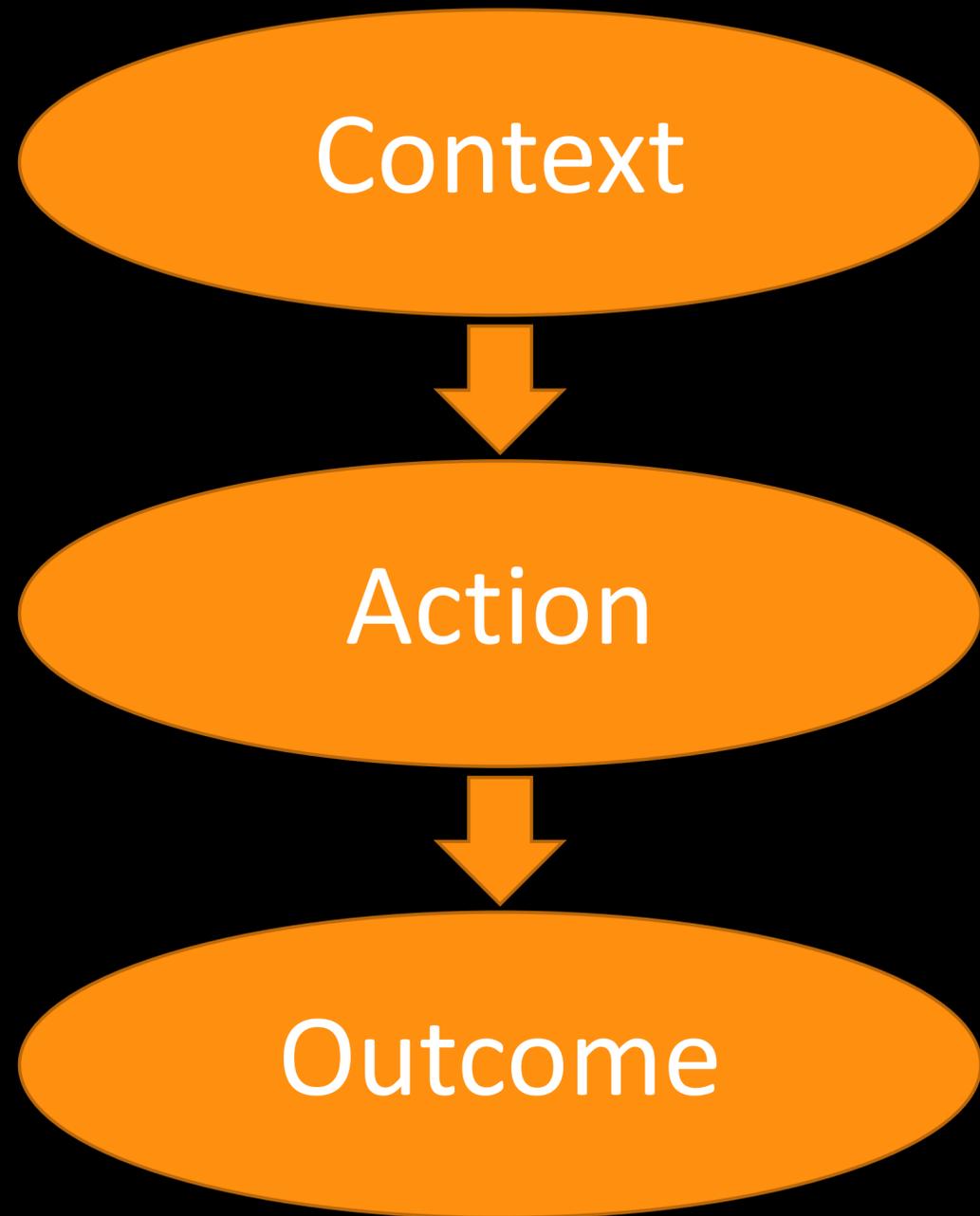


Anatomy of an example

Andrew reserves a book
He is charged \$1



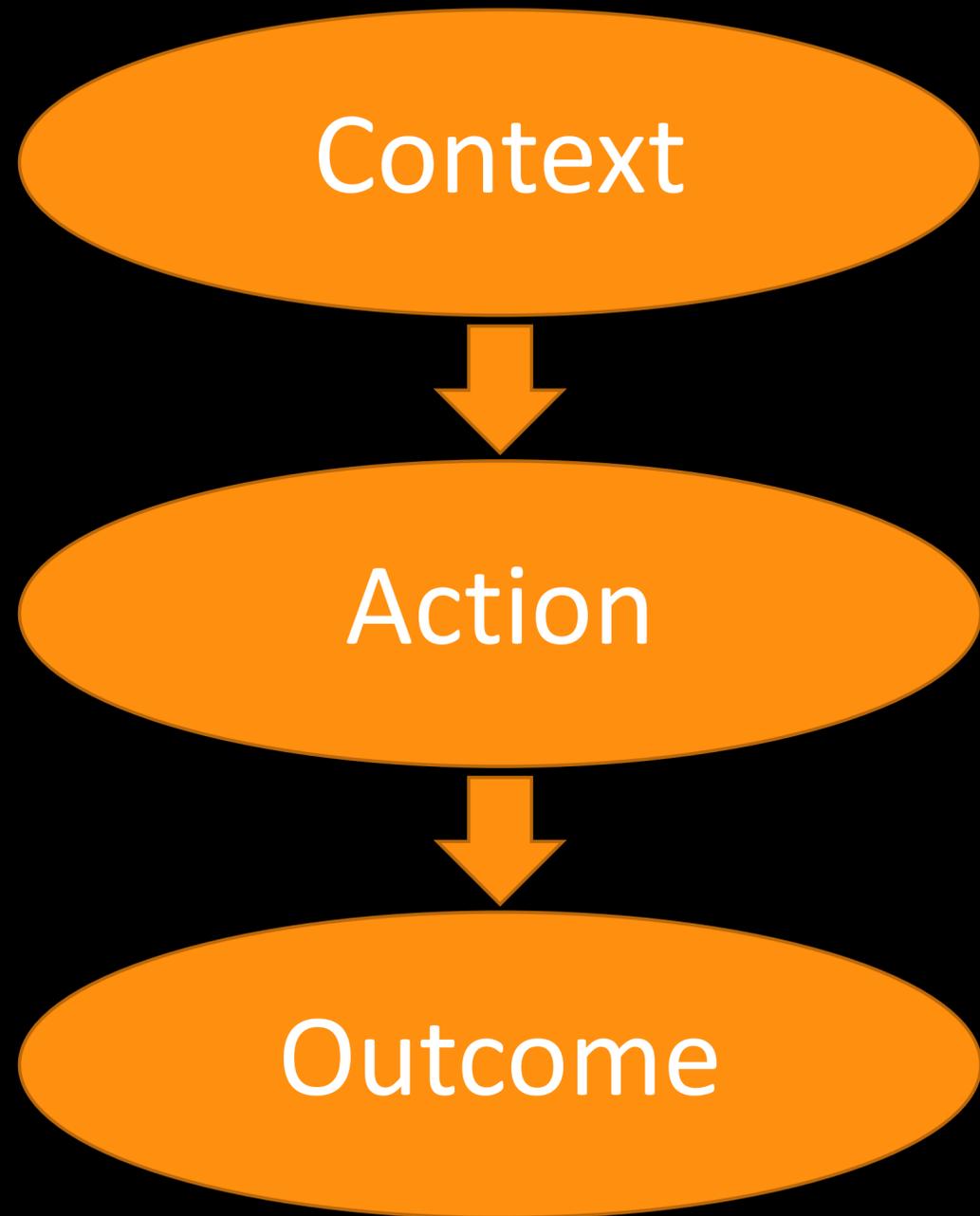
Anatomy of an example



Andrew reserves a book
He is charged \$1

Andrew reserves one book

Anatomy of an example

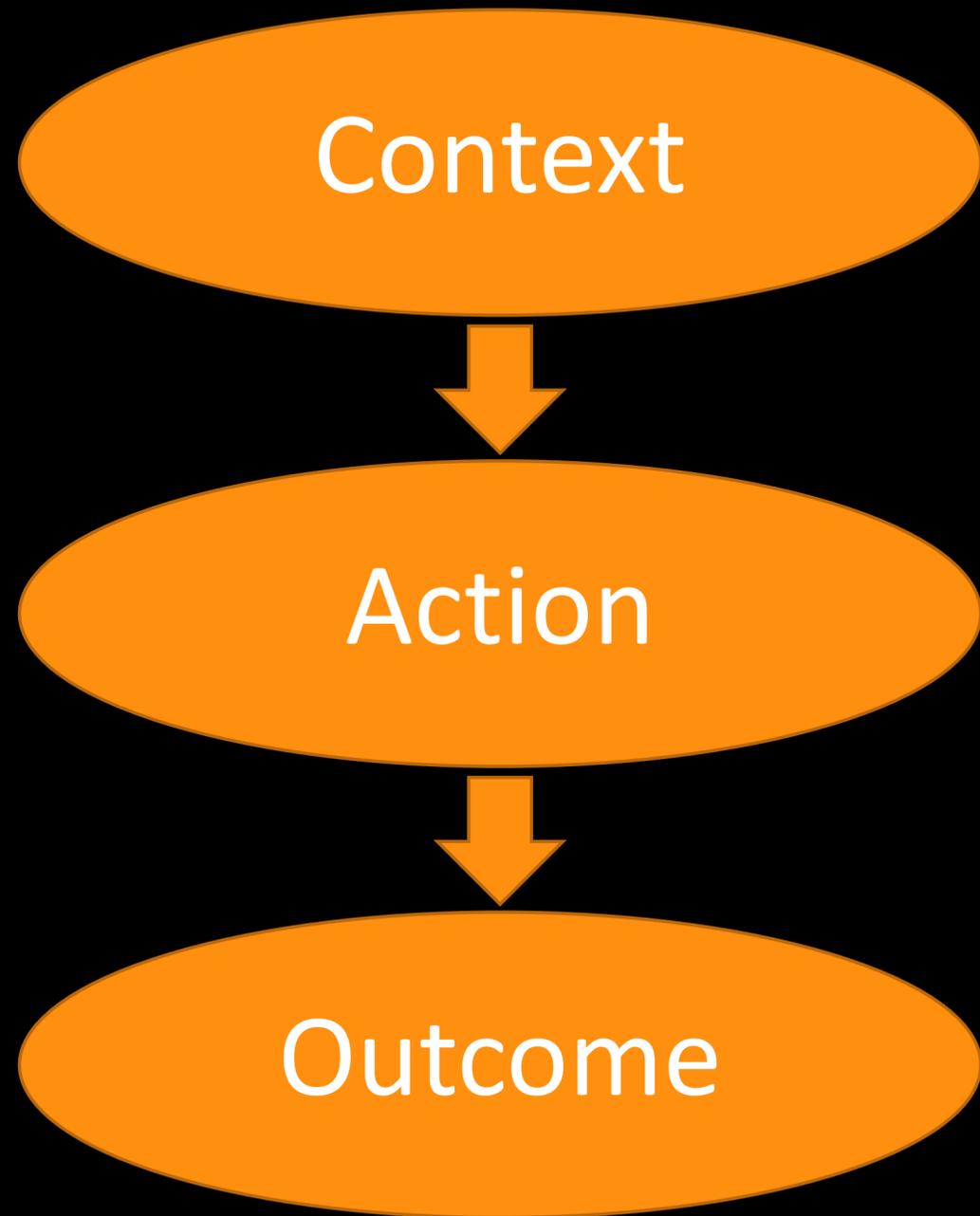


Andrew reserves a book
He is charged \$1

Andrew reserves one book

Andrew is charged \$1.00

Anatomy of an example

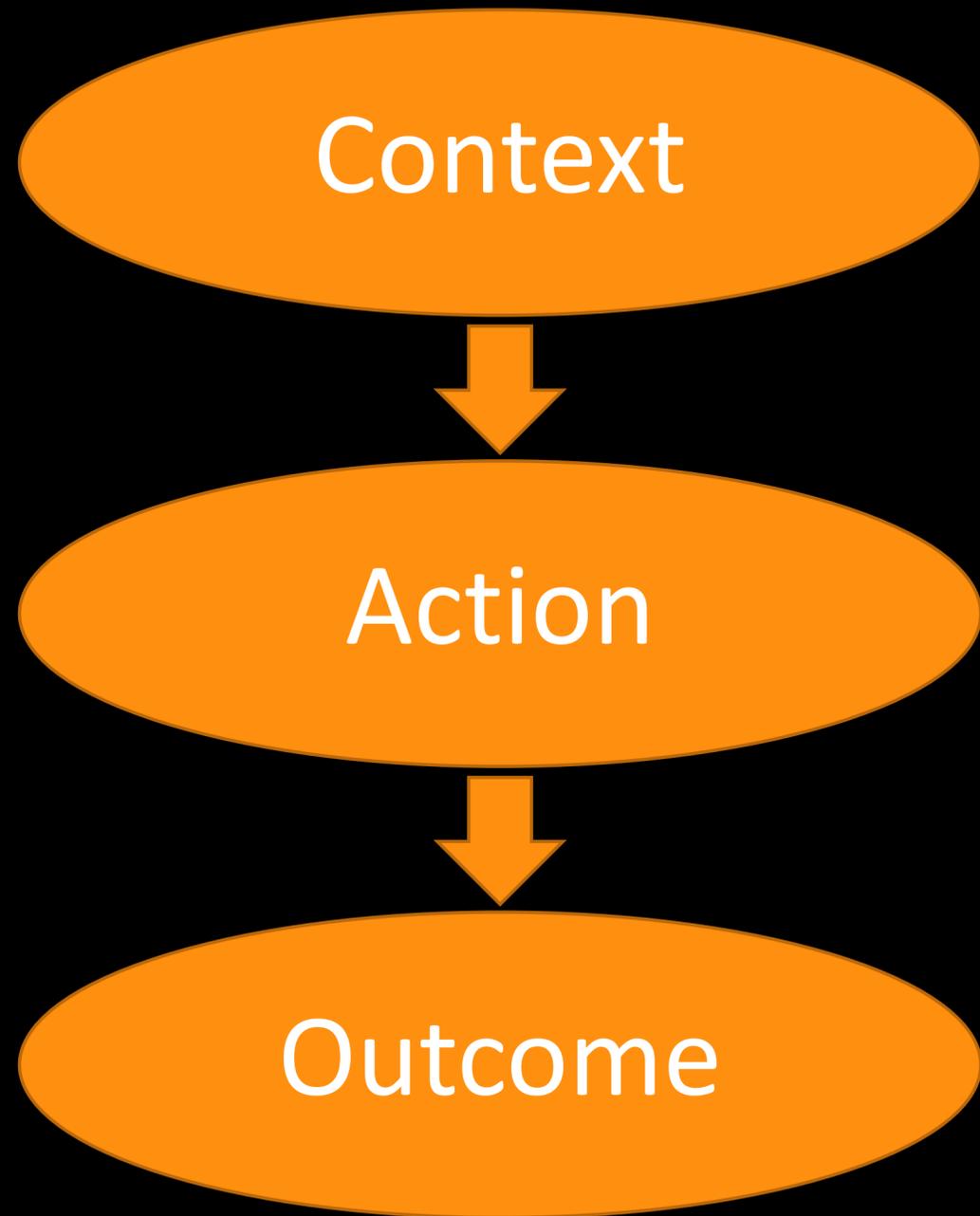


Library members pay a reservation charge of \$1 per item

Andrew reserves one book

Andrew is charged \$1.00

Anatomy of an example



Library members pay a reservation charge of \$1 per item

Andrew is a library member

Andrew reserves one book

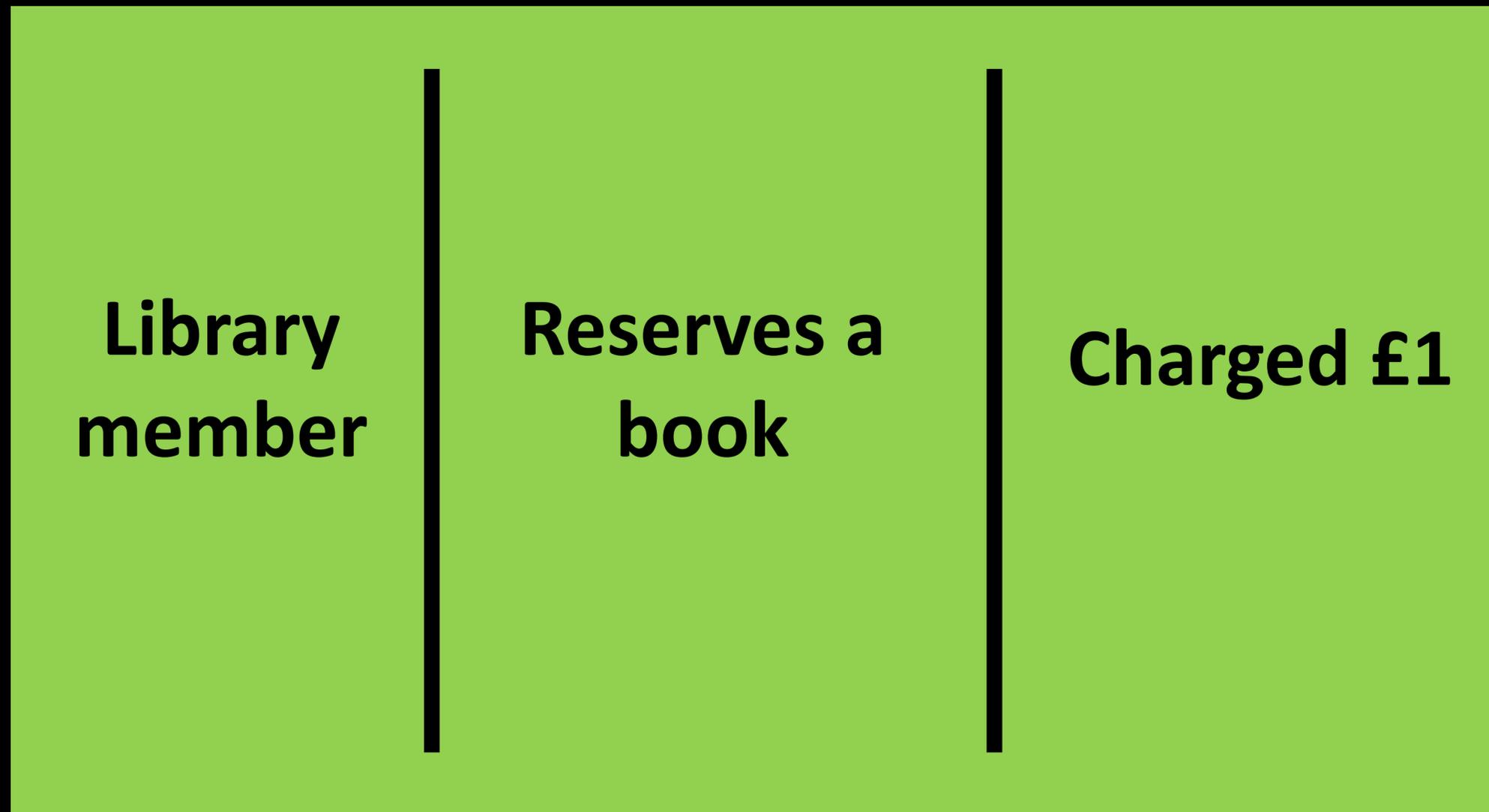
Andrew is charged \$1.00

Capturing an example - prose

Capturing an example - prose

**Andrew reserves a book
He is charged £1**

Capturing an example - columns



Capturing an example - symbols

- Andrew is a library member
- * Andrew reserves a book
- => He is charged £1

Capturing an example - sketch

A hand-drawn sketch of a library reservation form on a light blue background. The form is enclosed in a black rectangular border. At the top, it says "Membership number: A1234". Below this is a table with two columns: "Book title" and "Reserve?". The first row of the table contains "Watership Down" under "Book title" and a small square box containing an "X" under "Reserve?". Below the table, it says "Charge: £1.00".

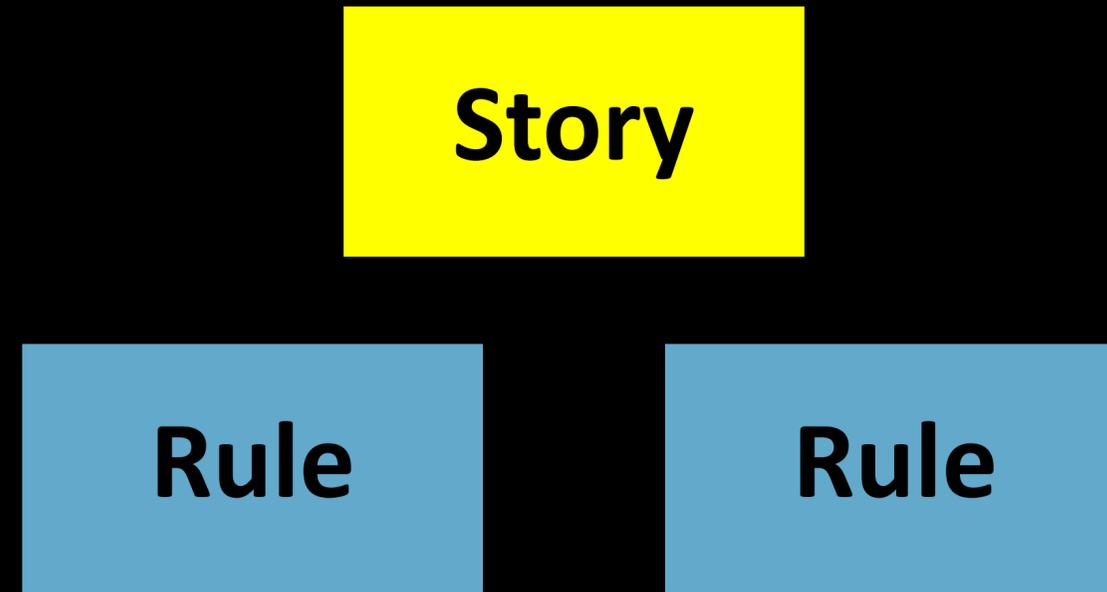
Book title	Reserve?
Watership Down	<input checked="" type="checkbox"/>

Visual feedback

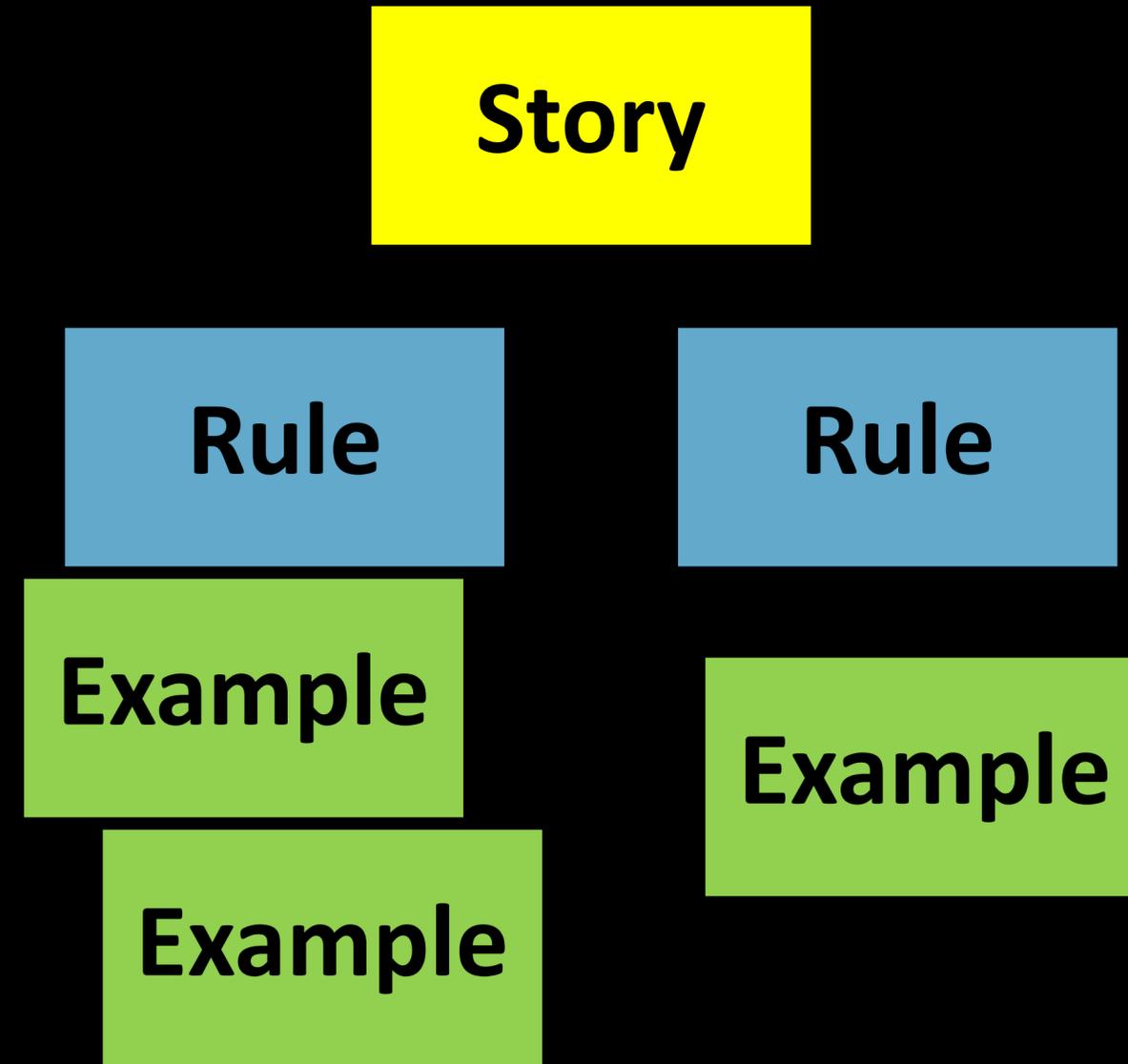
Visual feedback

Story

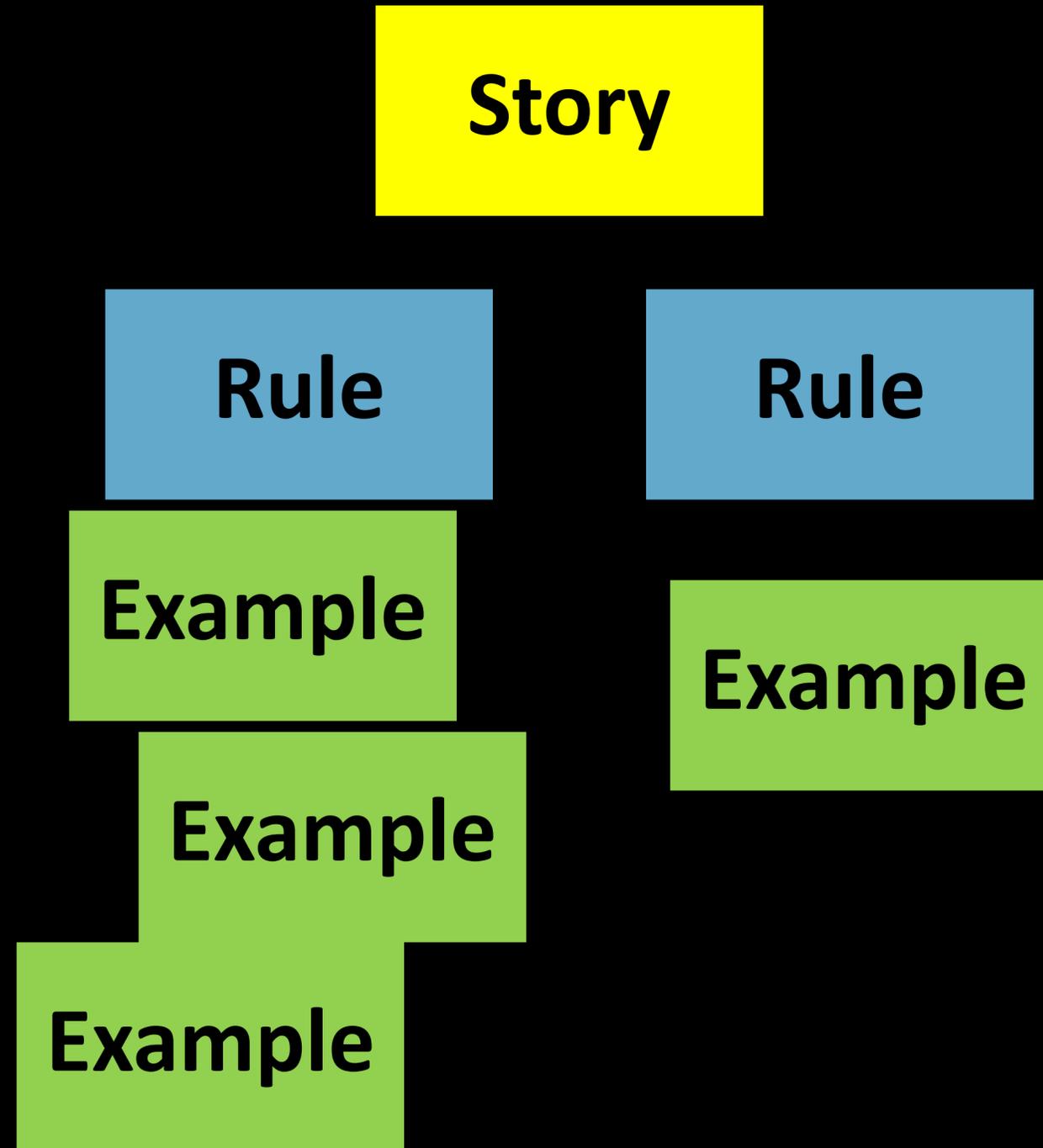
Visual feedback



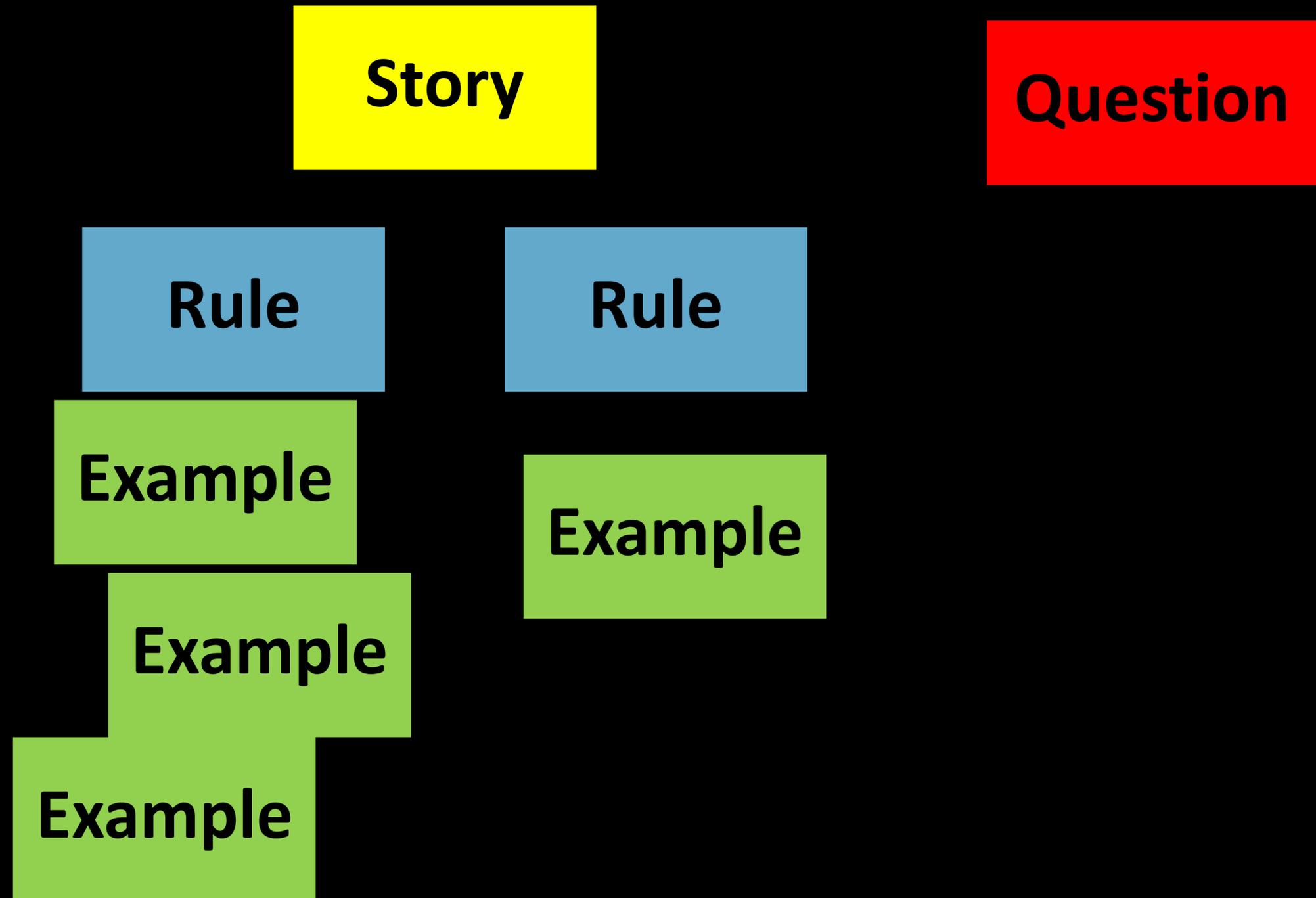
Visual feedback



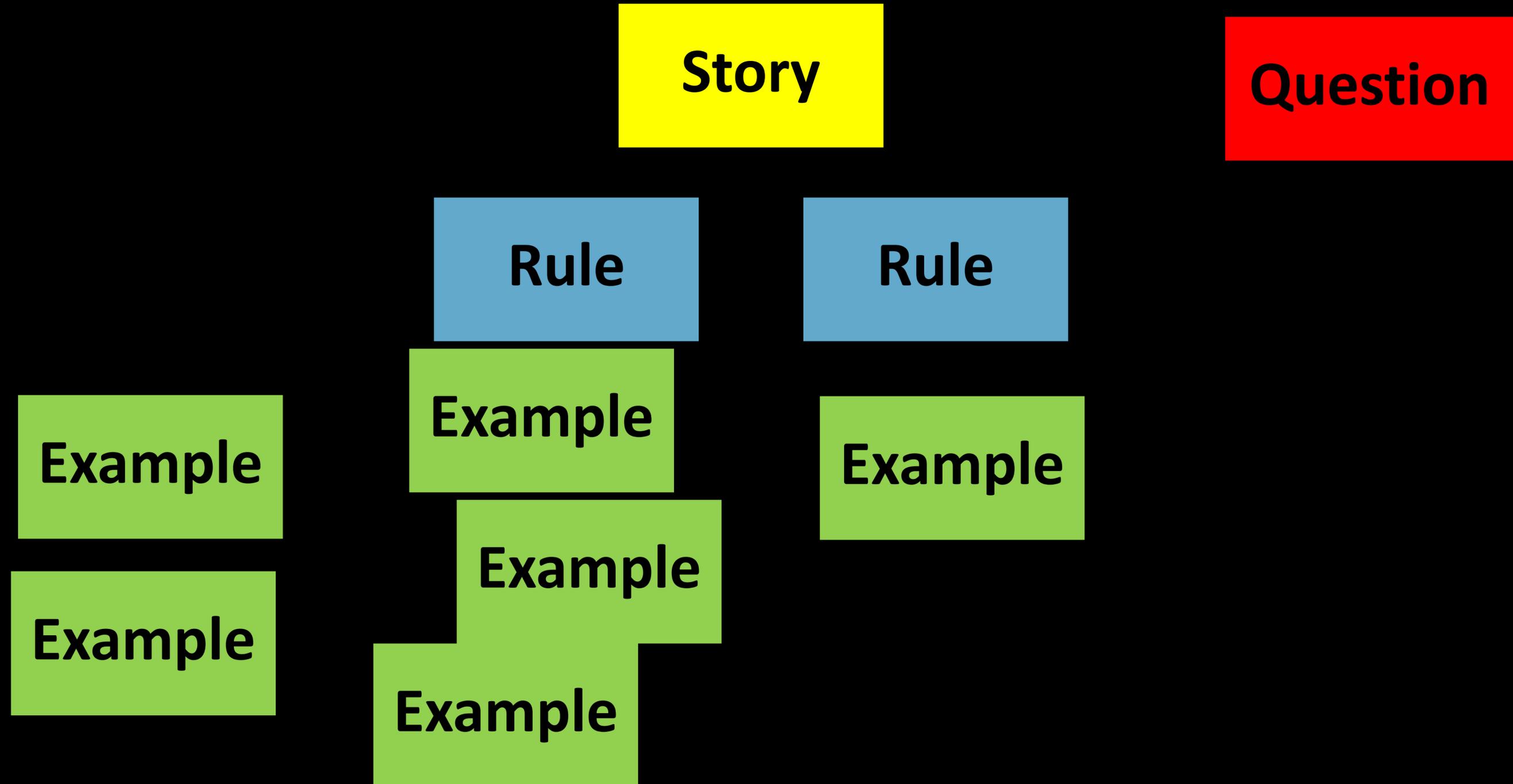
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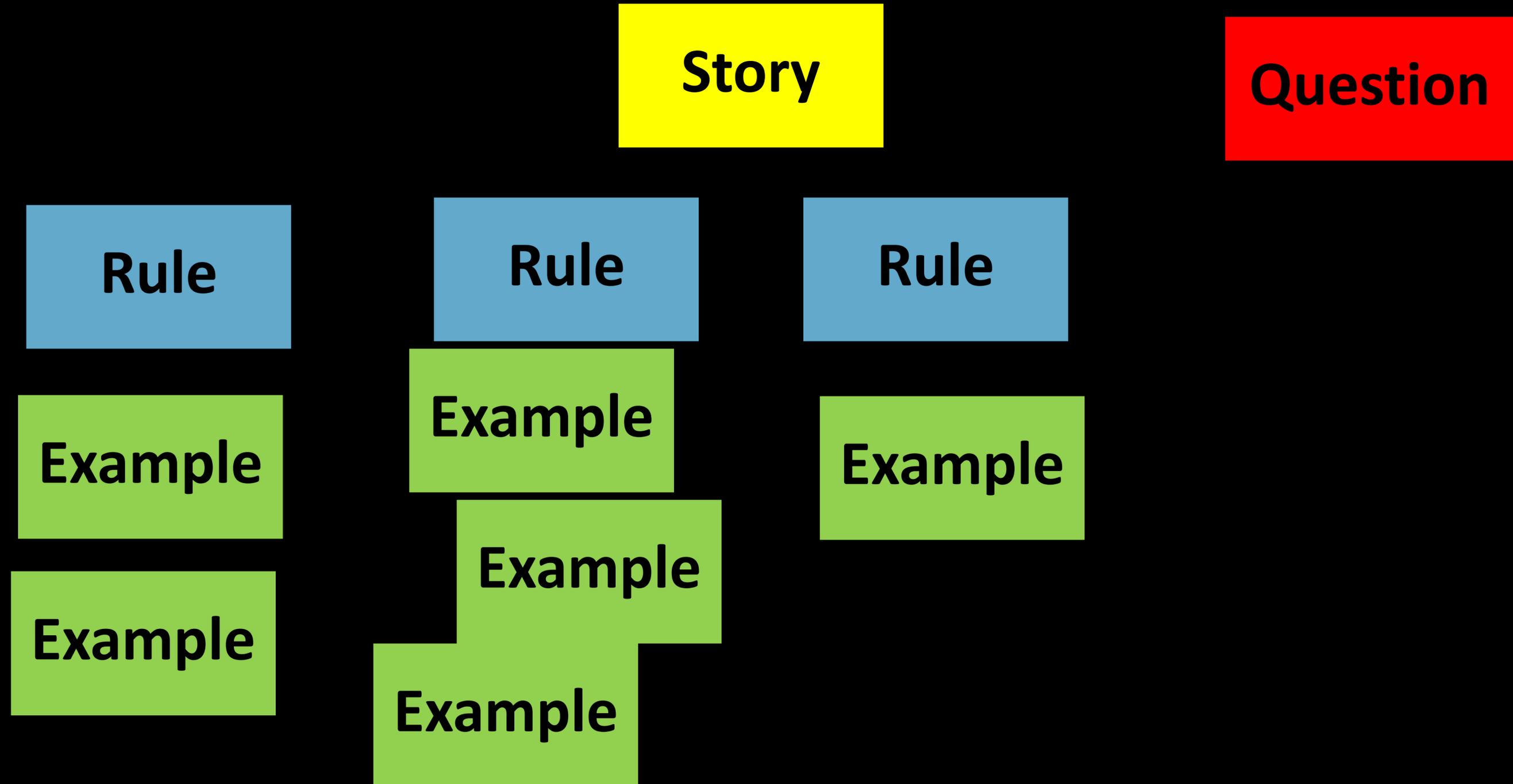
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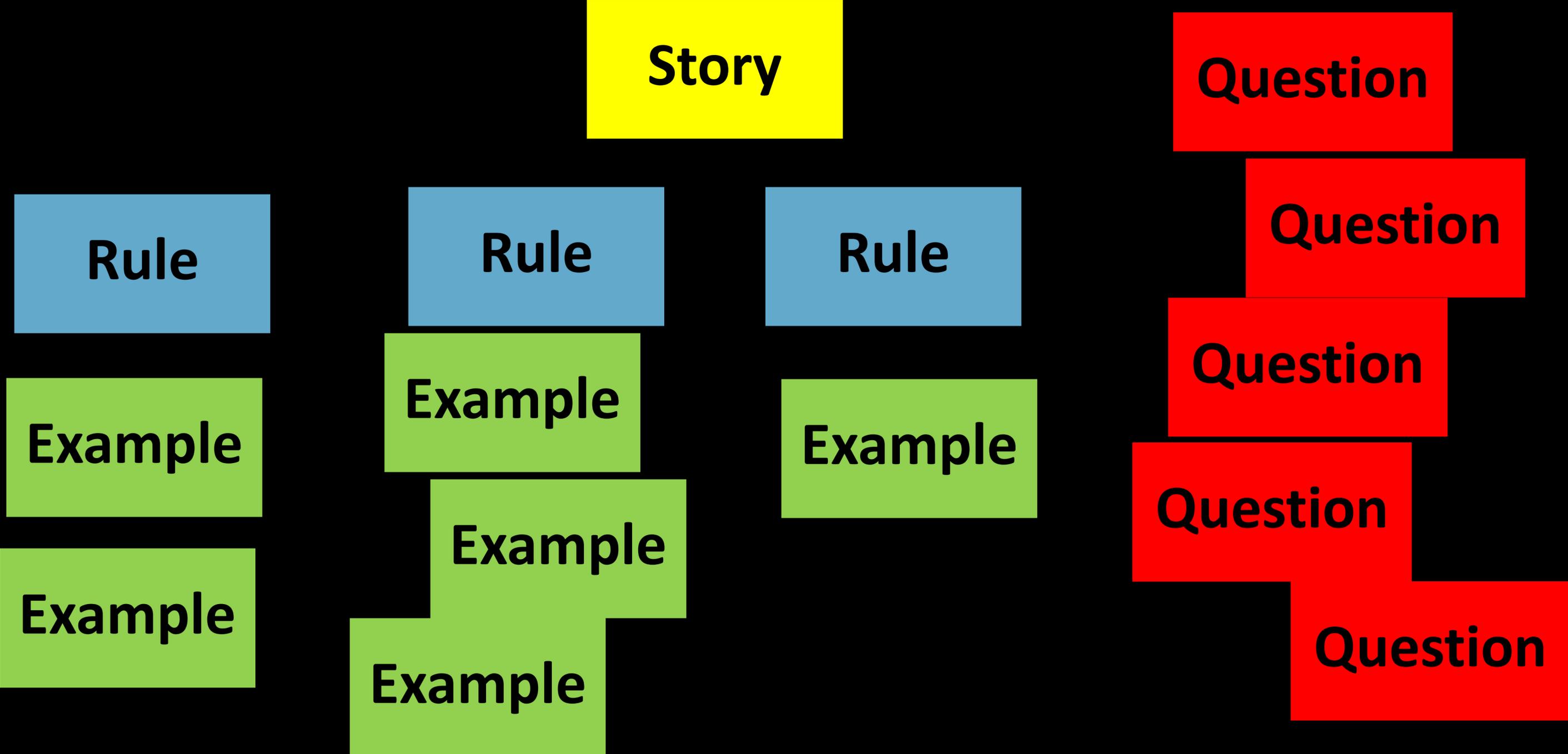
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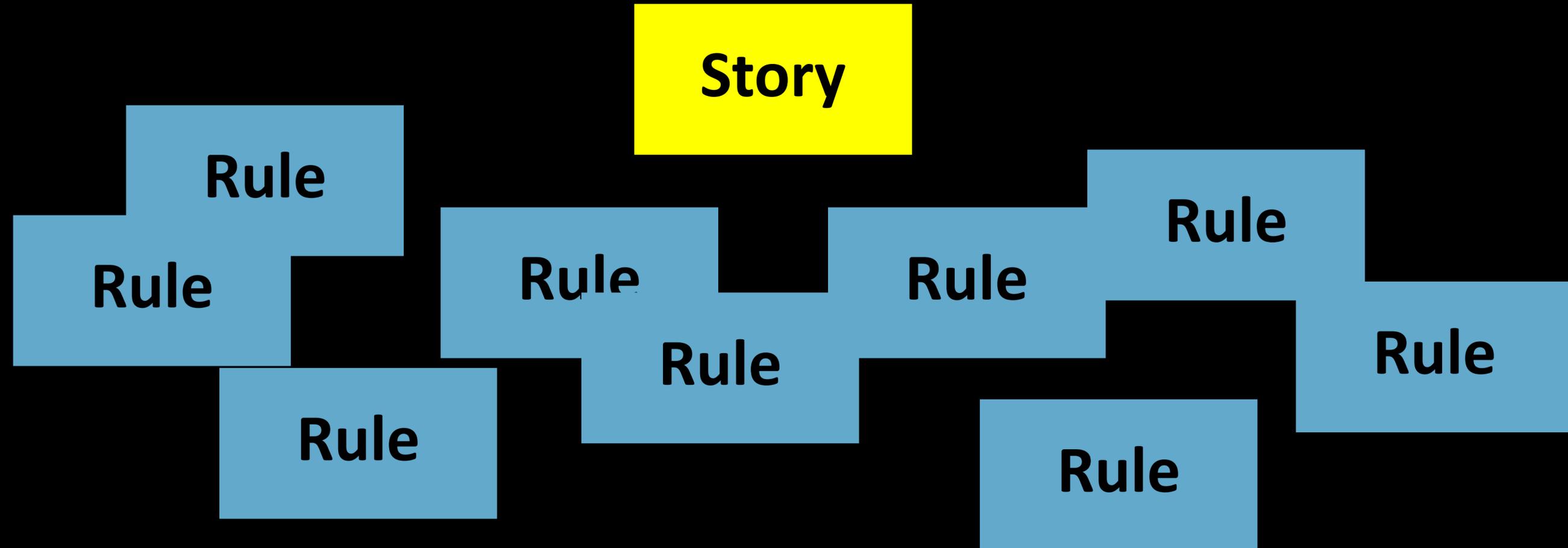
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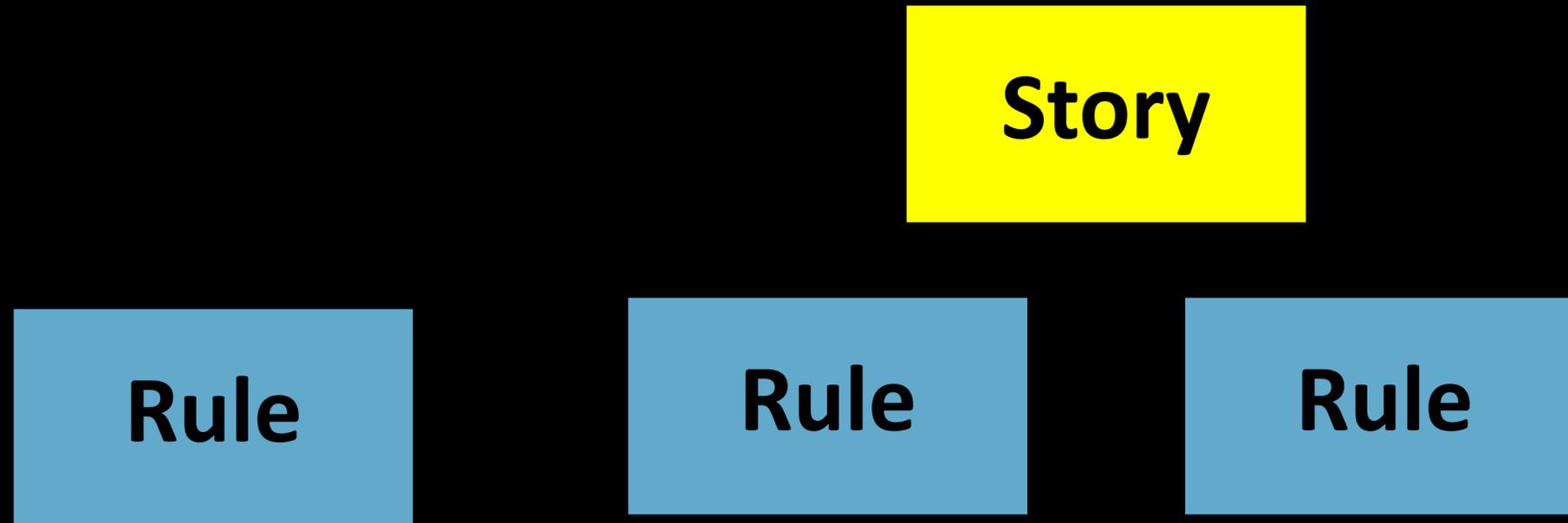
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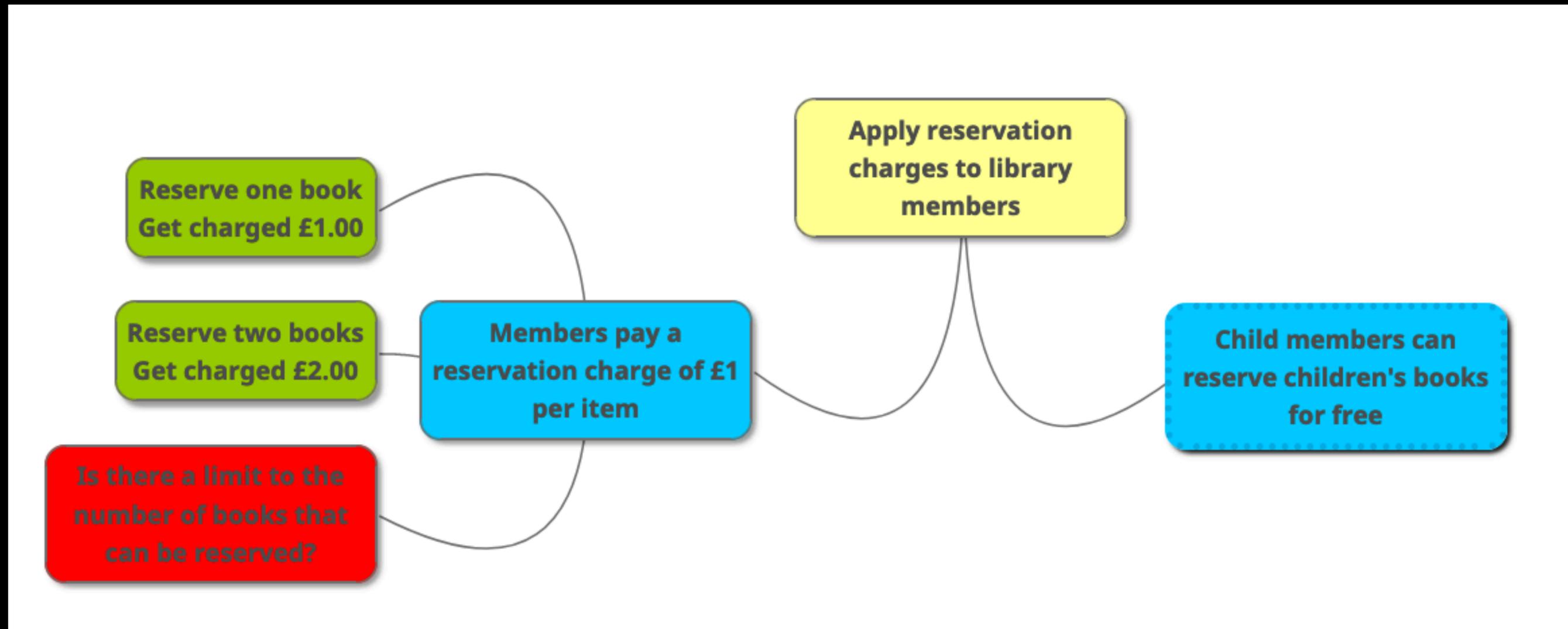
Visual feedback



Remote working - spreadsheet

	A	B	C	D	E
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					

Remote working - Mindmup



Remote working - Miro

Selecting a job to view

A user should be able to select a job to view its details

A user should be able to select a recently completed job to view its details

A user should be able to close job details

A user should be able to select another job while already viewing one

Examples | 37

- Test Jobs are available in the Run History table
* A user clicks anywhere on the row of a Test Job.
=>A report side panel with the job title & status appears.

- Test Jobs are available in the Run History table
* A user clicks on the name of a Test Job.
=>A report side panel with the job title & status appears.

- Test Jobs are available in the Running and in queue table
* A user clicks anywhere on the row of a Test Job.
=>A report side panel does not appear

- Test Jobs are available in the Recently Completed table with status cancelled which have no reports (cancelled while still queued)
* A user clicks anywhere on the row of a Test Job.
=>A report side panel should be shown saying "No test steps run, report unavailable."

- Test Jobs are available in the Recently Completed table
* A user clicks anywhere on the row of a Test Job.
=>A report side panel with the job title & status appears.

+

- The job details panel is showing
* The user clicks on an empty space outside the panel
=> The job details panel is closed

- The job details panel is showing
* The user clicks on a row in the Run History table
=> The job details panel is not closed

- The job details panel is showing
* The user clicks on an the cross icon on the panel
=> The job details panel is closed

- The job details panel is showing
* The user presses the <esc> key
=> The job details panel is closed

+

- The report panel is visible and shows job A
* User clicks on job B
=> The report panel changes its contents to show job B

- The report panel is visible and shows job A
* User clicks on job A
=> The report panel does not change

- The report panel is visible and shows job A from Recently Completed table
* User clicks on job B in Running and in queue table
=> The report panel should be closed

Remote working - CucumberStudio

The screenshot displays the CucumberStudio interface with a feature file containing several Gherkin scenarios. The scenarios are organized into columns, each with a title, a rule (R), and one or more examples (E). A question (Q) is also present at the bottom left.

- Scenario 1:** A diagnostics report should contain testengine configuration.
 - Rule (R):** A diagnostics report should contain testengine configuration.
 - Example (E):** - The user generates a diagnostic report. * The user chooses to remove sensitive information. -> The readyapi-testengine.yaml is included but with database connectivity information specified with the key 'database' is omitted.
- Scenario 2:** A diagnostics report should contain vmoptions.
 - Rule (R):** A diagnostics report should contain vmoptions.
 - Example (E):** * The zip has been fetched. -> Then the zip should contain all vm flags that the application got started with.
 - Example (E):** - The vmoptions cannot be found. * The zip is fetched. -> zip content should state the information was unavailable.
- Scenario 3:** A diagnostics report should contain the application launch command.
 - Rule (R):** A diagnostics report should contain the application launch command.
 - Example (E):** * The zip is been fetched. -> The application launch command is included.
 - Example (E):** - Application launch command cannot be retrieved. * The zip is fetched. -> zip content should state that the application launch command was unavailable.
- Scenario 4:** A diagnostics report should contain license type.
 - Rule (R):** A diagnostics report should contain license type.
 - Example (E):** - A license is installed. * the zip has been fetched. -> Then the zip should contain the full information of the license including license type, license key, license expiration, activation state, maximum number of concurrent jobs and license owner.
 - Example (E):** - A license is not installed. * the zip is been fetched. -> Then the zip should contain information stating that there is no license installed.
- Scenario 5:** Share a full diagnostic report with CC.
 - Rule (R):** Share a full diagnostic report with CC.
- Scenario 6:** A diagnostics report should contain list of external jars.
 - Rule (R):** A diagnostics report should contain list of external jars.
 - Example (E):** - There are jars in {installDir}/bin/ext. * the zip has been fetched. -> It includes a list of all external jar file names.
 - Example (E):** - There are no jars in {installDir}/bin/ext. * the zip is been fetched. -> zip content should state that no external jars were found.
- Scenario 7:** A diagnostics report should contain operating system information.
 - Rule (R):** A diagnostics report should contain operating system information.
 - Example (E):** * the zip has been fetched. -> zip contains operating system name and version of the system on which testengine is running.
 - Example (E):** - The diagnostic report has been fetched. * the operating system information cannot be found. -> zip contents state the information was unavailable.
- Scenario 8:** A diagnostics report contains a metafile which describes extra information that can not be expected to be in the log file.
 - Rule (R):** A diagnostics report contains a metafile which describes extra information that can not be expected to be in the log file.
 - Example (E):** * the zip has been fetched. -> the zip contains a meta-data file.
- Scenario 9:** It is clearly stated what is included in the report.
 - Rule (R):** It is clearly stated what is included in the report.
 - Example (E):** - I have decided to download a status report. * I want to verify exactly what will be included in the status report. -> I should see a list of the included files before downloading.
- Scenario 10:** Can the 'database' key be specified multiple times in the config file?
 - Rule (R):** Can the 'database' key be specified multiple times in the config file?
 - Example (E):** no.
- Scenario 11:** What happens with the OS info if testengine is running from a docker image? Could we add info about docker?
 - Rule (R):** What happens with the OS info if testengine is running from a docker image? Could we add info about docker?
- Scenario 12:** What does the application launch command look like on windows?
 - Rule (R):** What does the application launch command look like on windows?

In my experience ...

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Keep example mapping
short
(less than 30 minutes)

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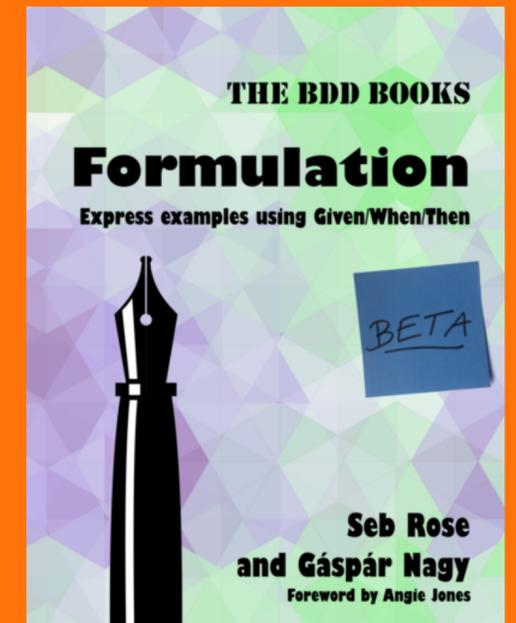
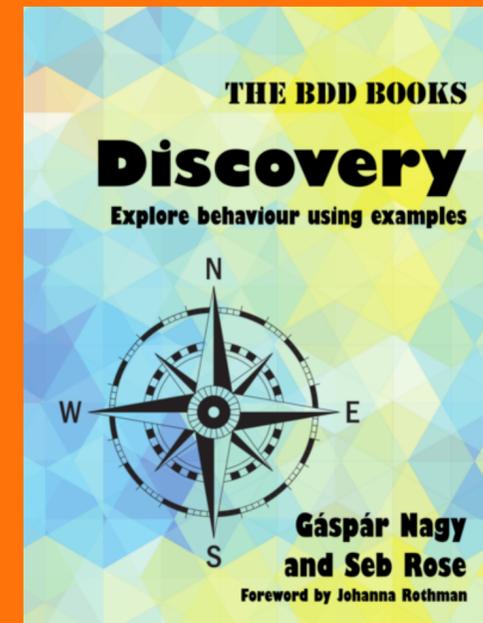
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High bandwidth is priority
(don't use Given/When/
Then)



<http://bddbooks.com>

Seb Rose

Twitter: @sebrose

Blog: <https://cucumber.io/blog/>

E-mail: seb.rose@smartbear.com