



A plugin for Mermaid diagrams

The process of making an APEX region plugin.
Experience with the Mermaid Javascript framework.



Me in logo's

ORACLE

25 years development



5 years development



DPA | GEOS

team
EIFFEL



Dienst ICT Uitvoering
*Ministerie van Economische Zaken en
klimaat*

Jurgen Turkstra





The trigger

Someone to ChatGTP: “Can you give me the code for the following requirements.”

ChatGPT: “Yes I can, here it is.”

Someone: “And can you make a nice diagram out of the following data”

ChatGPT: “No, I can not. But you can use Mermaid for this.”





What is Mermaid?

Javascript based diagramming and charting tool

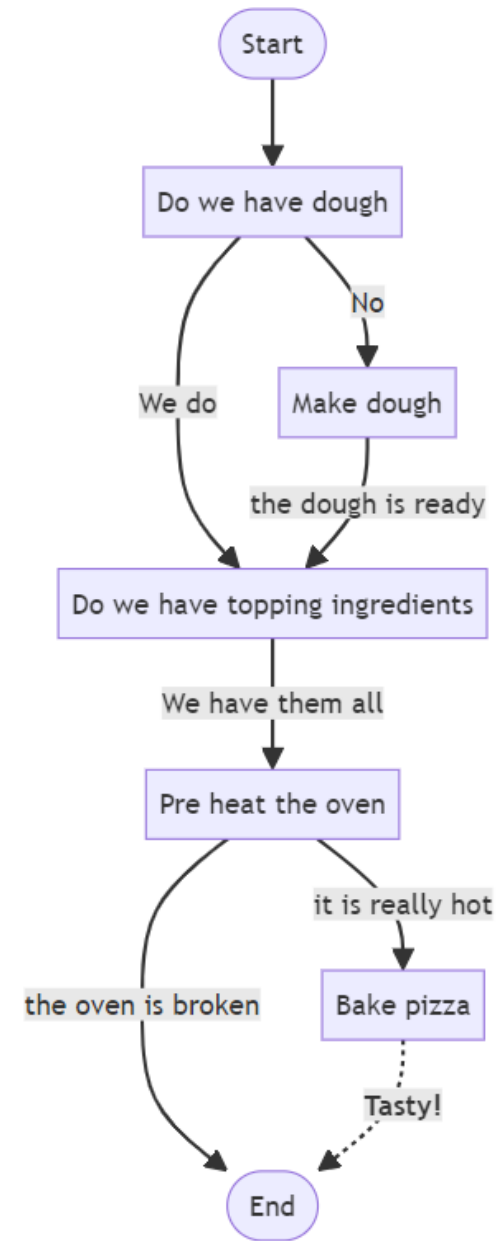
Website: [Mermaid.js.org](https://mermaid.js.org)

Diagram types



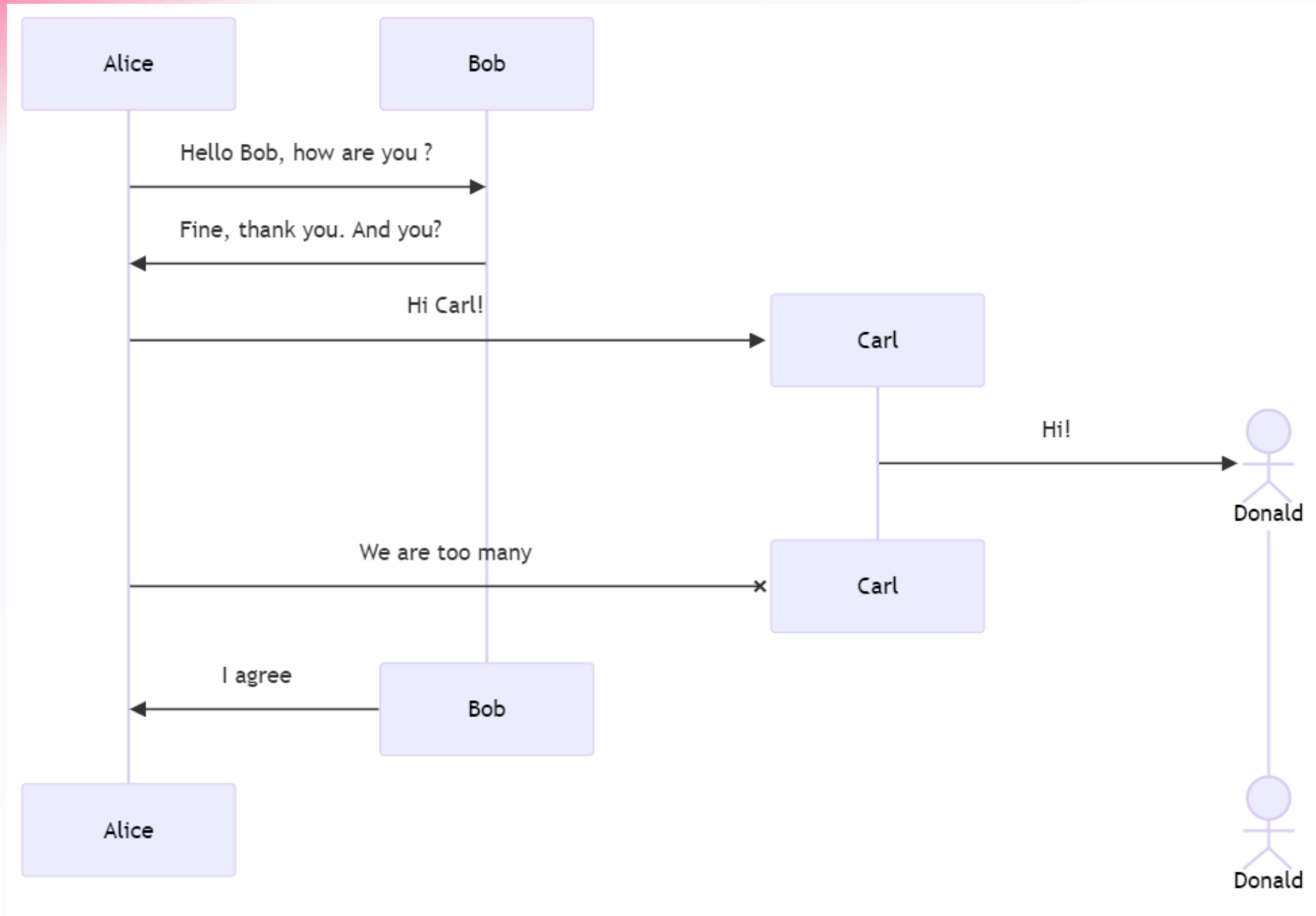


Flowchart



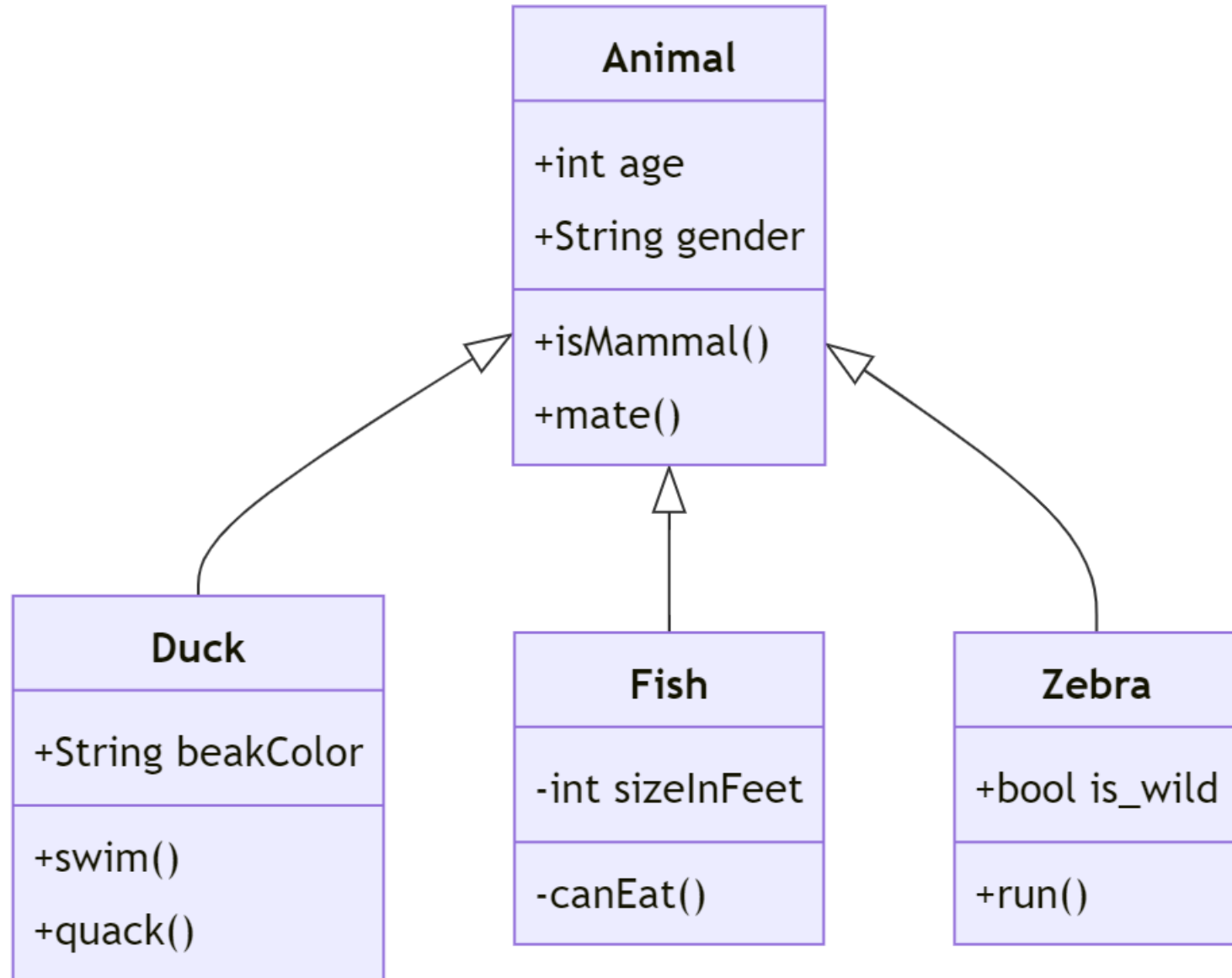


Sequence diagram



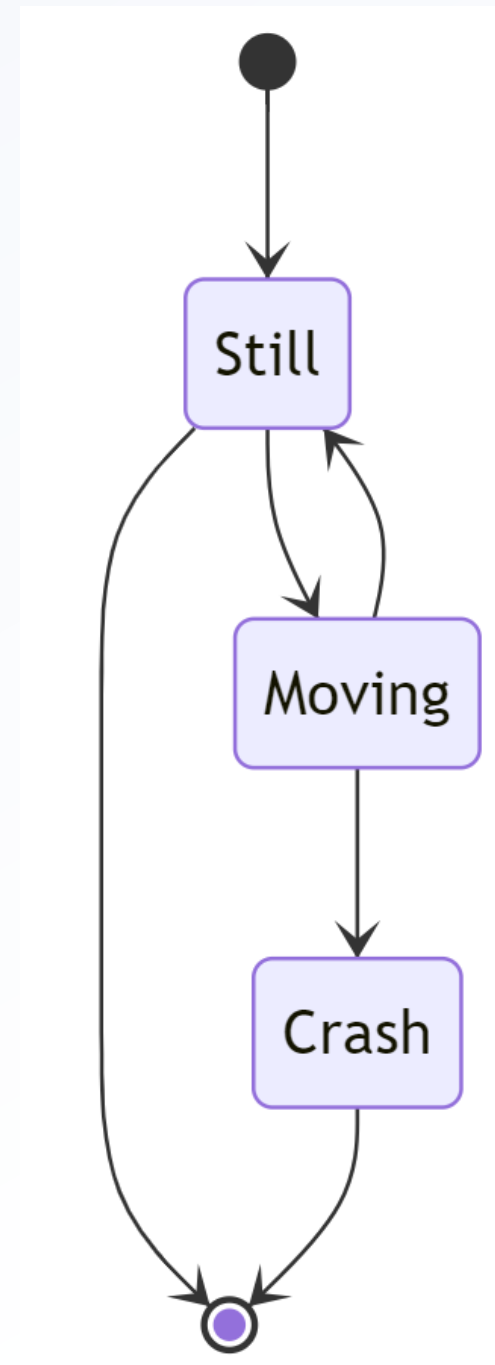


Class diagram



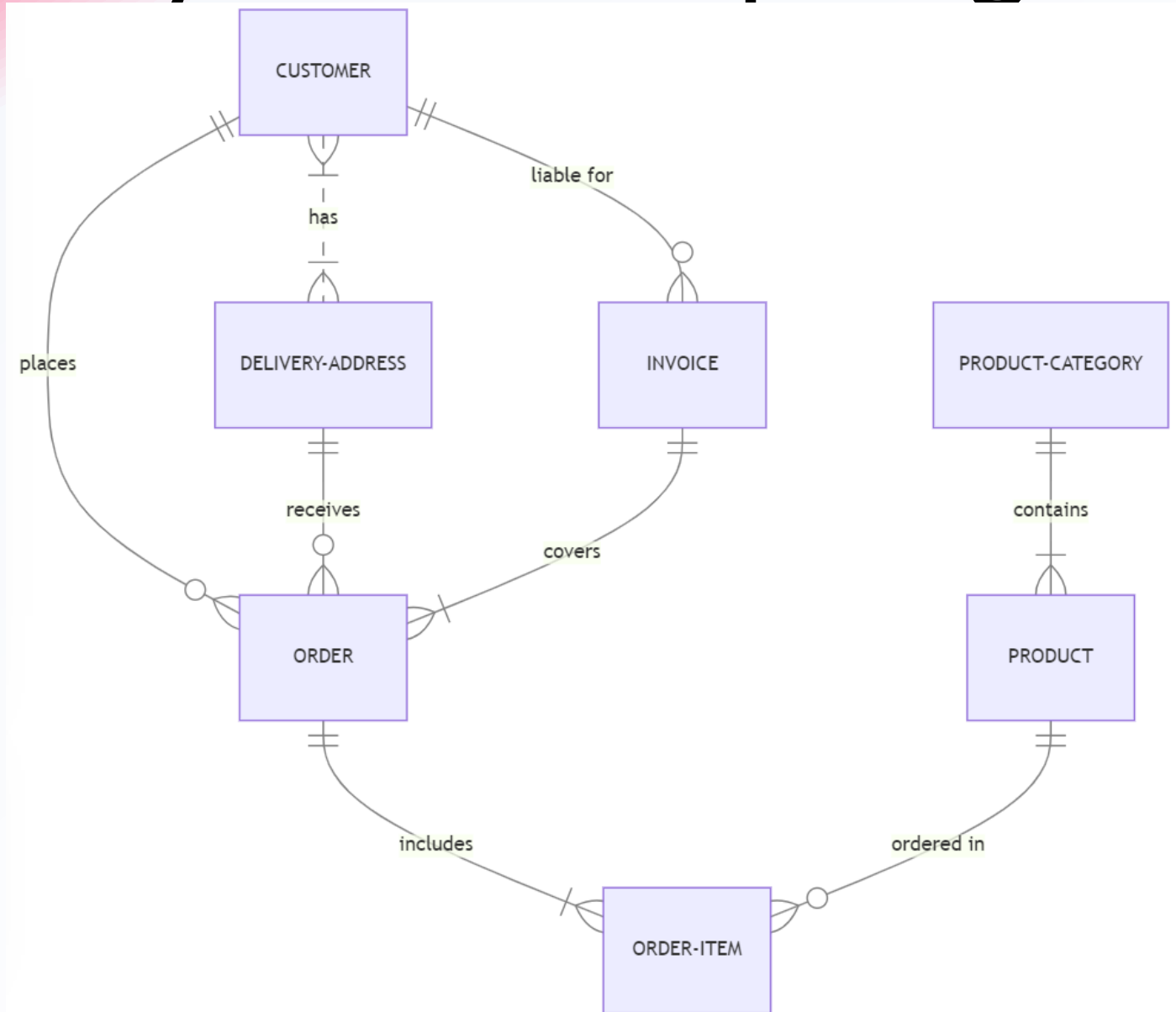


State diagram





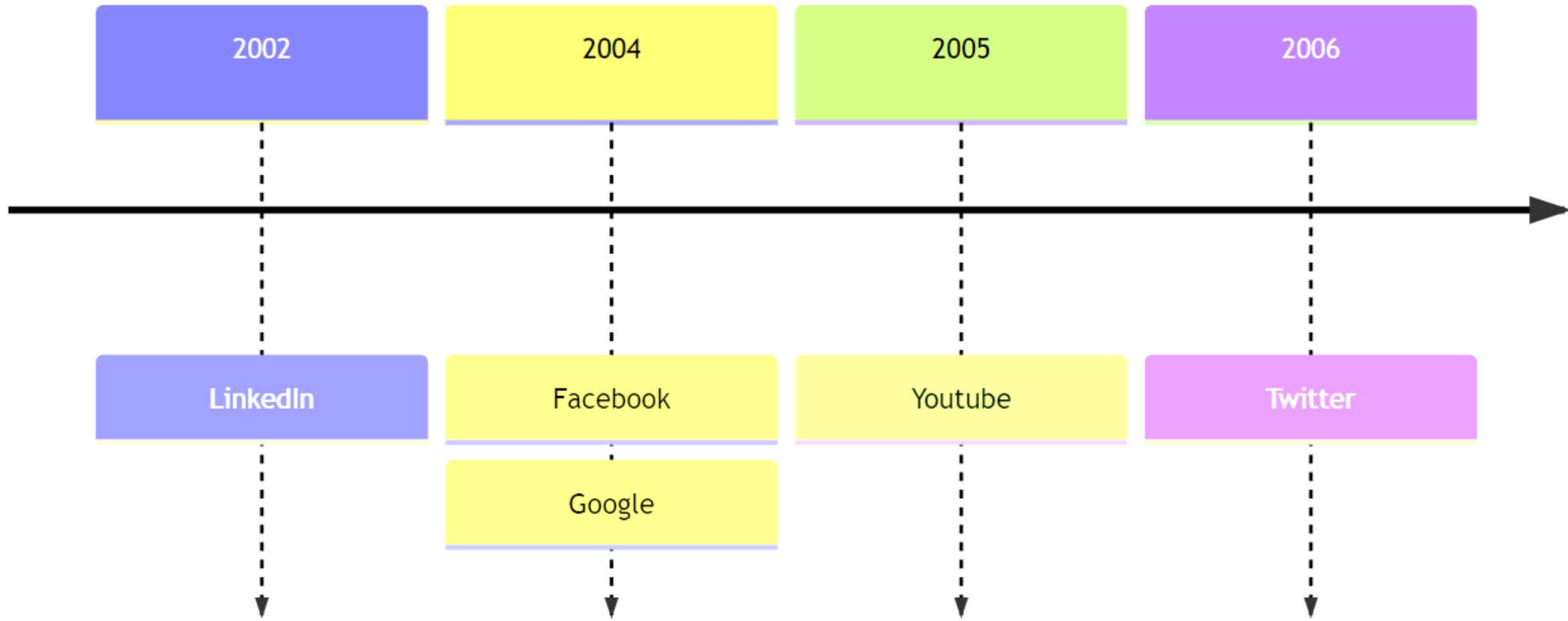
Entity relationship diagram





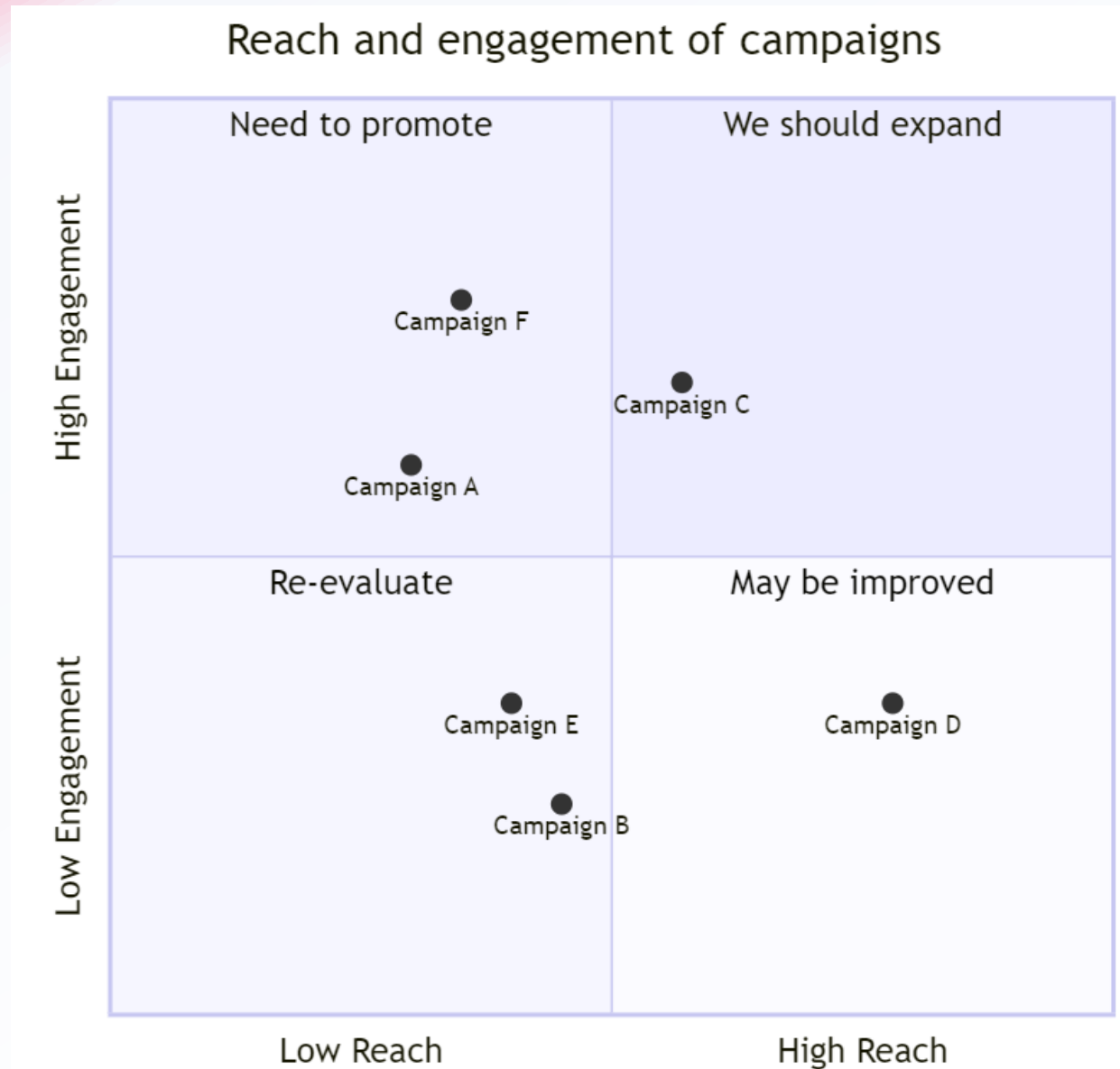
Timeline

History of Social Media Platform





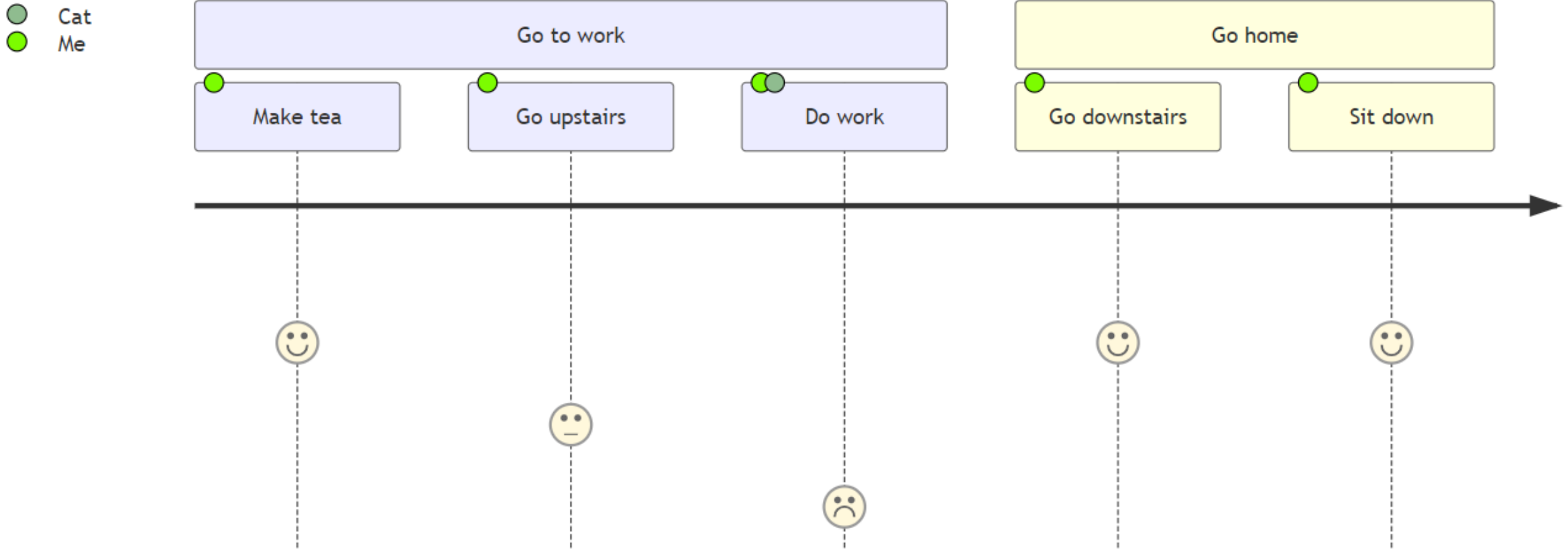
Quadrant chart





User Journey

My working day





There is more

Gannt

Pie chart

Requirement diagram

Gitgraph

C4 diagram

Mindmaps

Zenumi (sequence diagram)

Sankey

Block diagram (flowchart variation)



Integration 1

Live editor

Mermaid chart - Enterprise

Community integrations





Integration 2

In HTML, recommended:

```
<body>
  <p>Here is a mermaid diagram:</p>
  <pre class="mermaid">
    graph TD
      A[Client] --> B[Load Balancer]
      B --> C[Server01] B --> D[Server02]
  </pre>
</body>
<script type="module">
  import mermaid from 'https://cdn.jsdelivr.net/npm/.../mermaid.esm.min.mjs';
  mermaid.initialize({ startOnLoad: true });
</script>
```



Create a plugin

Simple plugin example

Apex.world plugins

Already made

Why creating a home made

- Javascript module

- Both database code and text

- Avoid showing the diagram code





Deep dive

Beginner, intermediate or a deep-dive?

Deep-dive, it's about Mermaids

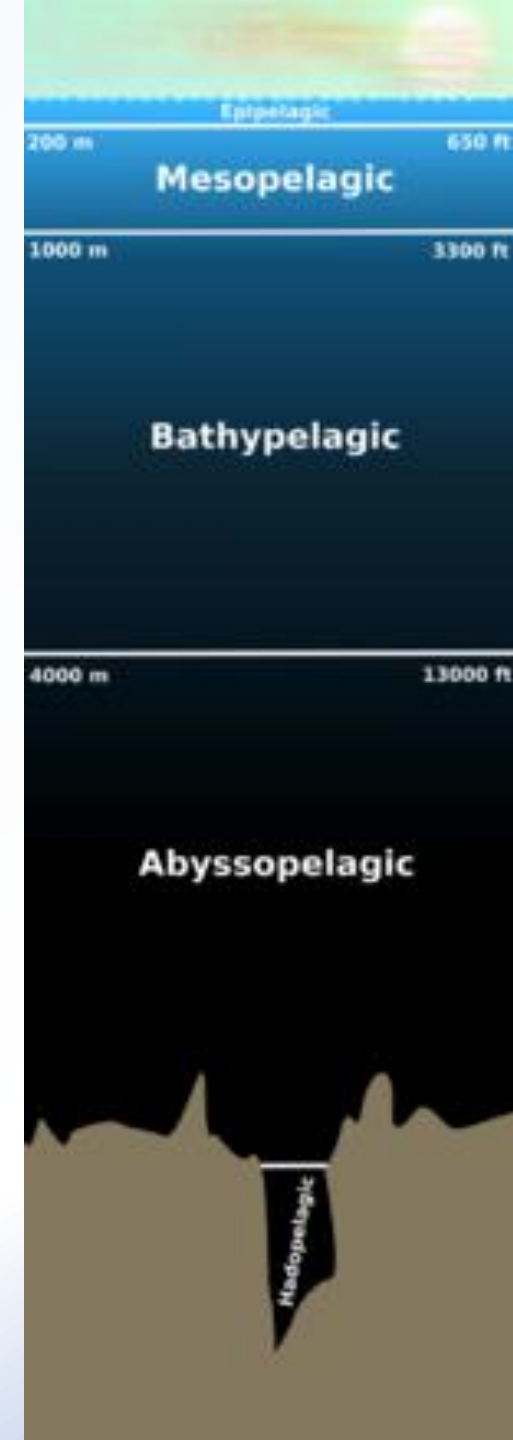
*“Deep-Sea mer generally stays in the lower Mesopelagic Zone or the Bathypelagic zone, (**200m-3300m** below surface) occasionally venturing higher or lower down.”*

<https://mermaiddreamers.weebly.com/deep-sea-mermaid.html>

ChatGPT: ... mythical creatures ...

<https://www.princeton.edu/news/2019/02/04/mermaids-reveal-secrets-below-ocean-floor>

*“MERMAIDS drift passively, normally at a depth of **1,500 meters** — **about a mile** below the sea surface ...”*





Javascript source

Javascript module

Started with this option with the online url

Needs server setup

Code only available in script tag

One Javascript file on cdn.jsdelivr.net

Copy to you application or file system

Large file, 2.8MB. It is fast enough.





Plugin JS text

A get started plugin. Text only.

Source attribute is:

‘Plain Text’

or ‘different Data Sources’-multi row based

Make your own attributes in the plugin

Application scope

Component scope

Avoid seeing the diagram code





The 'has it all' Plugin

Explain the code

Text example

Database example





Dynamic action plugin

Legenda

Mermaid render

A simple dynamic action plugin



Learnings 1

Legenda in a pop-up works after some tweaking
HTML in diagram text. Including using classes.

Flowcharts only?

Markdown in flowcharts and mindmaps

Take care of standard use of symbols

Flowcharts rendered (Elk and Dagre) has specific differences

Better renderer (Elk) can not work with dotted lines

Diagram type have different settings

Styling

Code





Learnings 2

Not always the choice of the position of an element in a diagram.

- Orientation

- Longer lines (Dagre)

- Invisible lines

- Subgraphs in flowcharts

- Order of the element aliases

Zoom and pan. Not available by default.

- Browser zoom

- It is an SVG

- ChatGPT (3.5) almost got the right code





Conclusion

Creating a plugin is not that hard.

Diagrams do say more than 1000 report lines. Go Mermaid!



