



“A picture is worth a thousand words”

Can software developers draw pictures?

Lightning Talk: CppCon2020
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Jaguar Land Rover Ireland Services Ltd

A big “Thank you” to Almighty and
all caring people and communities
who has helped me, inspired me
and still doing so...

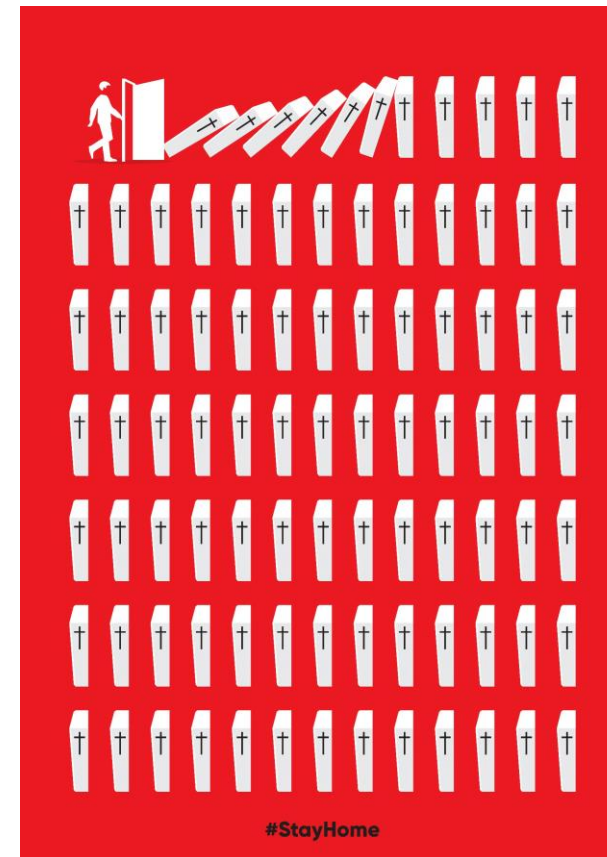
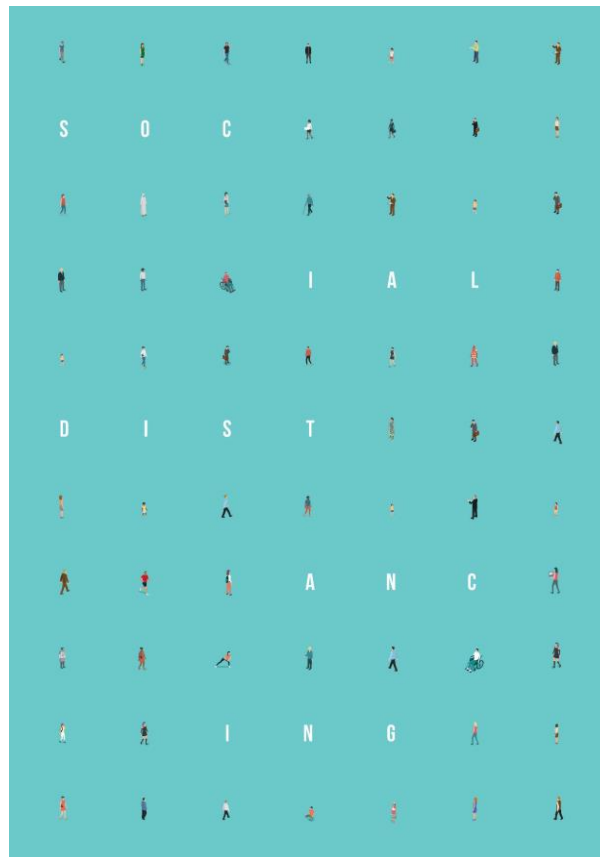
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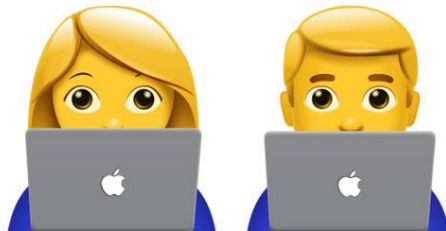


6 million people die
from smoking every year.

Your life is worth more
than a cigarette stick.



Who am I?



@KeralaTourism



@Limerick_ie

Can software developers draw pictures?



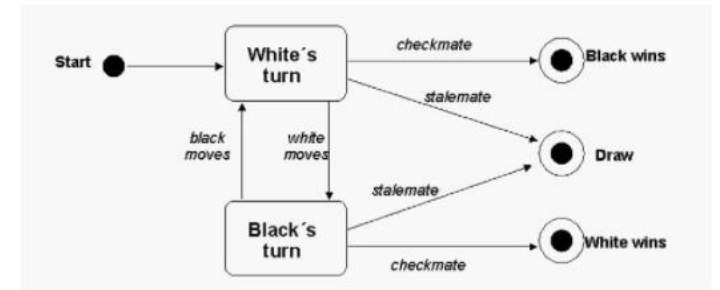
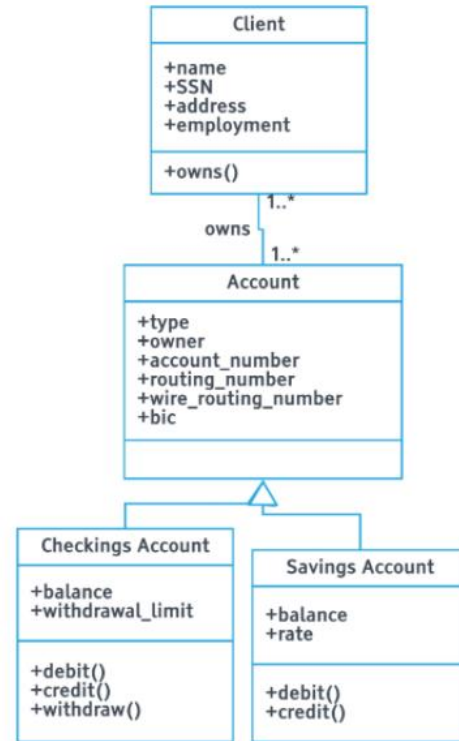
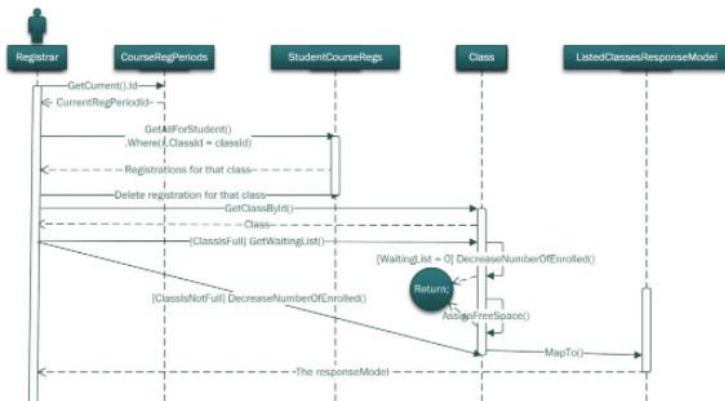
Is it only me? No... My husband too..



<https://www.linkedin.com/in/sambhudayalb/>

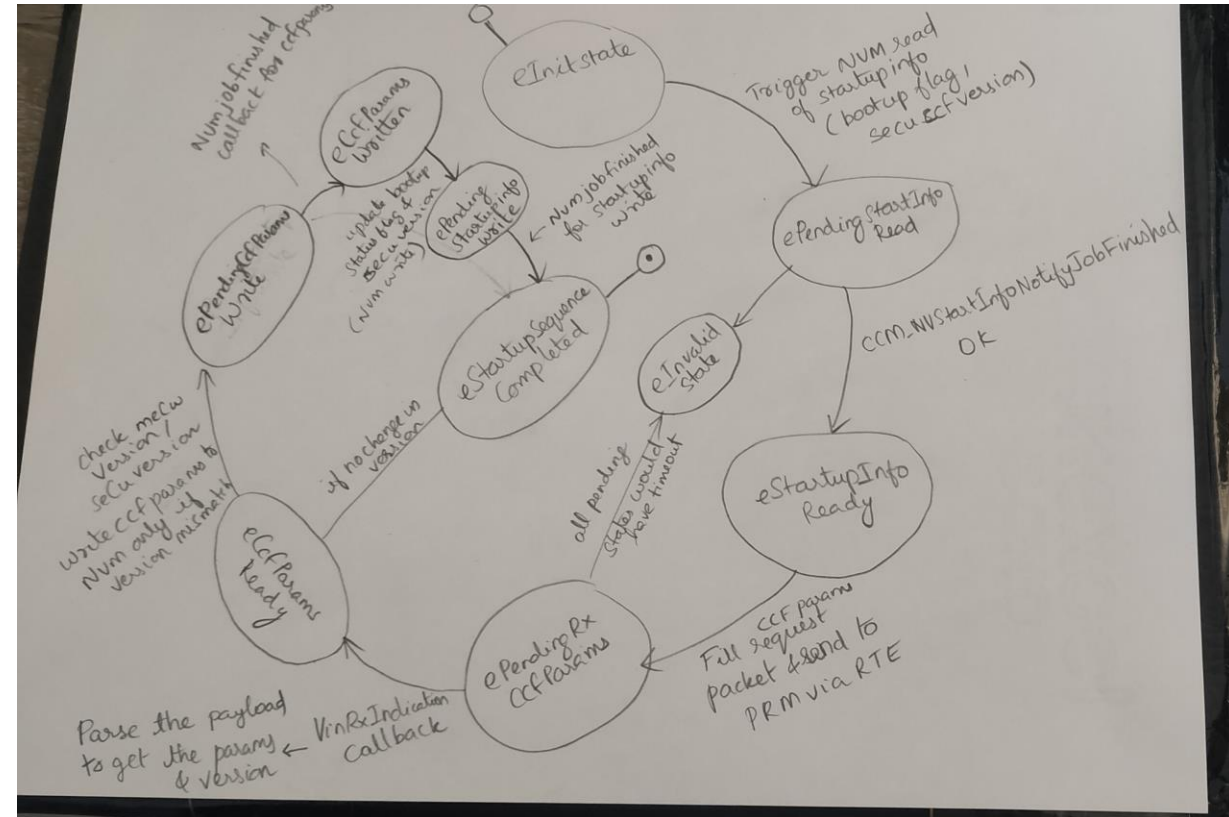
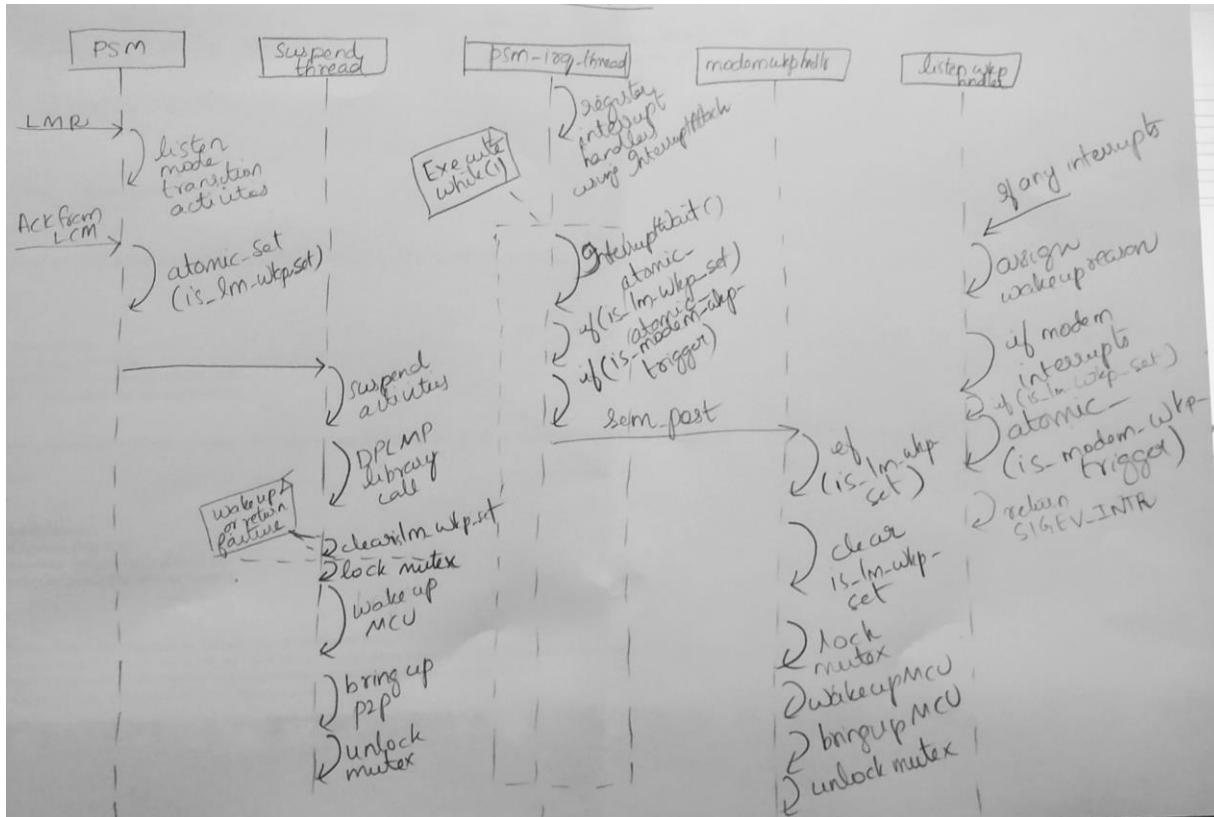
<https://www.artlimerick.com/limerick-artist-sambhu-dayal>

Do we draw pictures at work?



UML diagrams

Some real funny diagrams



Widely used proprietary tools

Visio



Enterprise Architect



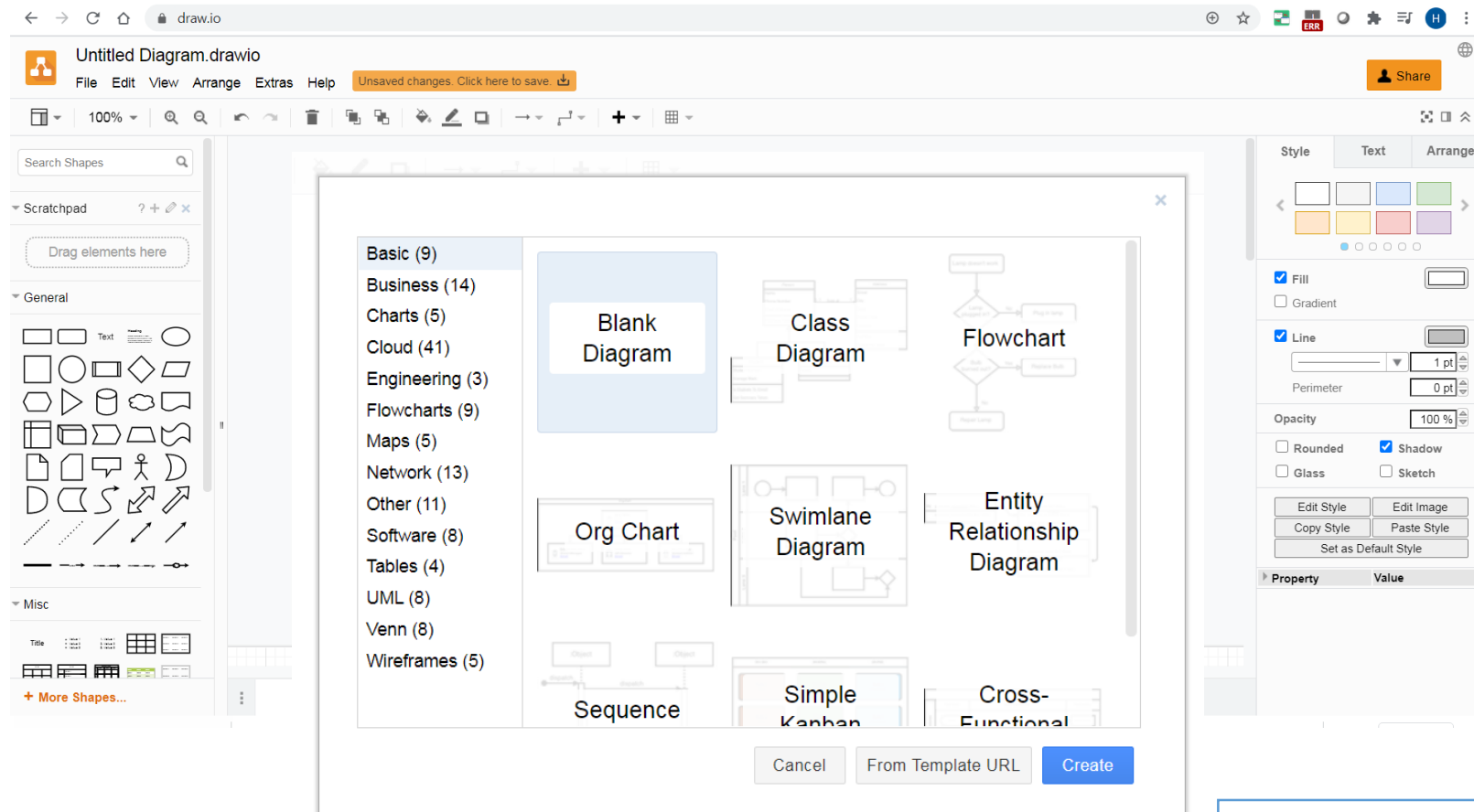
StarUML

No longer maintained - <http://staruml.sourceforge.net/v1/>

There are some interesting free tools....



<https://www.draw.io/>



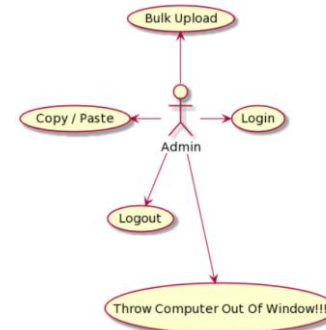
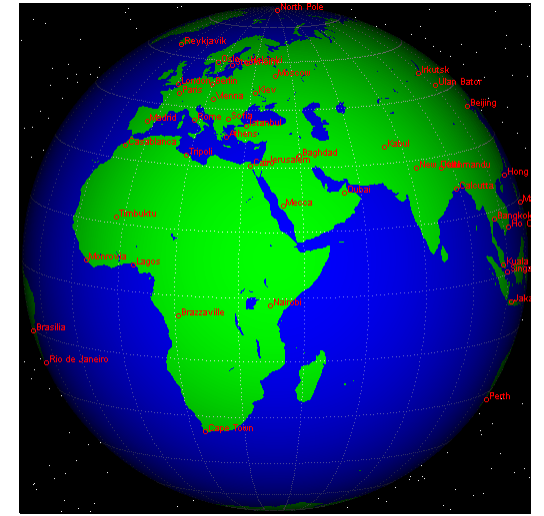
<https://github.com/jgraph/drawio-desktop>

Text to diagram converters

- **PlantUML**

- open source tool that converts simple textual descriptions to UML diagrams
- Not only UML diagrams - Earth diagram, UI wireframes and more..
- Textual descriptions could be separately stored
- Pictures can be saved in various image formats – SVG, PNG and so on.
- Integration to CI build systems
- Integration to doxygen doc / markdown doc

<http://plantuml.com/guide>

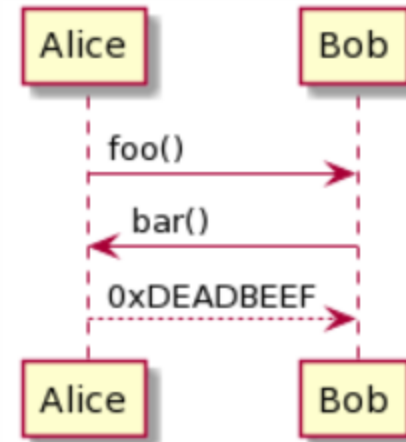


Components - Component Diagram



Three simple lines generate this diagram....

```
Alice->Bob : foo()  
Bob -> Alice : bar()  
Alice --> Bob : 0xDEADBEEF
```



Isn't it awesome?

Have a break!

- Use PlantUML to create Sudoku.
- The sudoku is randomly generated.

Edit online

```
@startuml  
sudoku  
@enduml
```

8					1			
		2		5				
		4		9			7	
						7	4	
5				6	3			
2	9					8		
	3			1	2	9		
					8	5		6

<http://plantuml.com>
Seed 1msu9iufmdsig
Difficulty 5900

Good news!

- PlantText : PlantUML based online live editor

<https://www.planttext.com/>

The screenshot shows the PlantText web interface. On the left, the 'File Manager' pane displays the 'Default Diagram' with the following PlantUML code:

```
1 @startuml
2 ~
3 title Access settings from config DB
4 ~
5 participant EthAPICseSrv
6 participant ConfigDbAPICseSrv
7 database ConfigDB
8 ~
9 ConfigDbAPICseSrv -> ConfigDbAPICseSrv : ReadSettingsFromCfgDb()
10 ConfigDbAPICseSrv -> ConfigDB : IKeyValue_ReadKV()
11 ConfigDbAPICseSrv -> ConfigDbAPICseSrv : PopulateConf()
12 ~
13 EthAPICseSrv -> ConfigDbAPICseSrv : ReadConfig()
14 EthAPICseSrv -> EthAPICseSrv : Get_Command_Func()
15 EthAPICseSrv -> EthAPICseSrv : Post_Command_Func()
16 ~
17 @enduml
```

On the right, the 'Access settings from config DB' diagram is visualized. It shows three components: 'EthAPICseSrv', 'ConfigDbAPICseSrv', and 'ConfigDB'. The diagram illustrates the following interactions:

- 'ConfigDbAPICseSrv' sends a 'ReadSettingsFromCfgDb()' message to 'ConfigDB'.
- 'ConfigDbAPICseSrv' sends an 'IKeyValue_ReadKV()' message to 'ConfigDB'.
- 'ConfigDbAPICseSrv' sends a 'PopulateConf()' message to 'ConfigDB'.
- 'EthAPICseSrv' sends a 'ReadConfig()' message to 'ConfigDbAPICseSrv'.
- 'EthAPICseSrv' sends a 'Get_Command_Func()' message to itself.
- 'EthAPICseSrv' sends a 'Post_Command_Func()' message to itself.

At the bottom of the diagram, there are links: [PNG](#) | [SVG](#) | [TXT](#) | [Edit](#).

Below the diagram, a small text line reads: "Thanks to PlantUML, Graphviz, Ace Editor, Johan Sundstrom (js-deflate), as well as Steven Nichols and Brian Folts. © Copyright 2013 - 2020 Arwen Vaughan | [Privacy Policy](#)"

The screenshot shows the PlantText web interface. On the left, the 'File Manager' pane displays the 'Default Diagram' with the following PlantUML code:

```
1 @startuml
2 ~
3 salt
4 {
5 ..Will you try PlantUML?..
6 ..[X]..Yes
7 ..[]..No
8 }
9 ~
10 @enduml
```

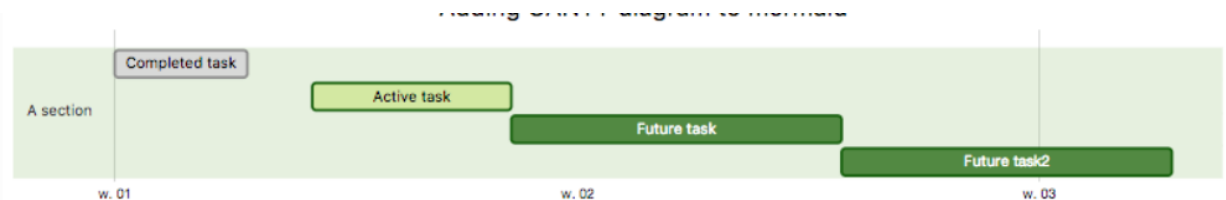
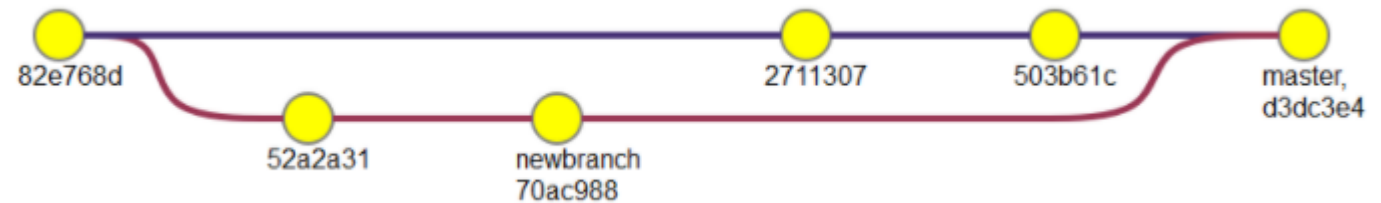
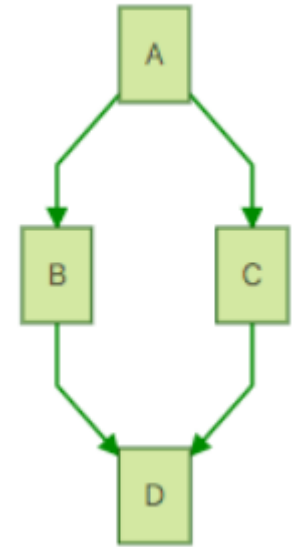
On the right, there is a 'Scratch area...' and a 'Will you try PlantUML?' dialog box with the following options:

- ☒ Yes
- ☐ No

Below the dialog box, there are links: [PNG](#) | [SVG](#) | [TXT](#) | [Edit](#).

Yet another cool tool here - mermaid

- Javascript based diagramming and charting tool.
- Mermaid can render:
 - Flowcharts
 - Sequence / class diagrams
 - Gantt diagram
 - Git graph and more



🏆 Mermaid was nominated and won the **JS Open Source Awards (2019)** in the category “The most exciting use of technology”!!!

<https://mermaid-js.github.io/mermaid/#/>

Finally comes : the most exciting tools





Thank you....

*Signing off...
Honey Sukesan*

in *honeysukesan*

 *hsukesan* ●

