



Agency Internal Workday

How can we learn new skills and what to learn

Background

You are working as a Junior UI Developer at a small agency and you are currently in an internal workday. The purpose of the day is to set aside time and resources to develop new skills with the company and discuss which technology to take in. The Design Lead and the Senior Developer suggest the following topics to work with today. You now have to pick a topic, group up with other colleagues to look into that topic and find out what it is and how it can be used. Finally you will present this to the others.

Topic 1 - Flexbox

"Flexbox is the new black. Or the new orange, since orange superseded black." says the Frontend Developer. The rest of the team agrees that Flexbox is indeed something that everyone is talking about. "Ehm, what is Flexbox" asks the Junior Developer. Silence. "Fine, lets look into it", say the CEO.

Your output is supposed to be:

- A presentation showing the basics of Flexbox. What is enough to know to use it?
- Example layouts using flexbox that can be used as boilerplate for new projects.

The Key Account Manager is anxious to know whether this is something he can sell to the client. Is there enough browser support for this?

Hint: check out caniuse.com

Suggested Resources:

<https://www.w3.org/TR/css-flexbox-1/>

<https://css-tricks.com/snippets/css/a-guide-to-flexbox/>

<https://philipwalton.github.io/solved-by-flexbox/>

<http://bennettfeely.com/flexplorer/>

<http://the-echoplex.net/flexyboxes/>

Topic 2 - Advanced MySQL - Joins

The Senior Developer starts talking about how the database queries can be optimized by using joins in SQL. The rest of the team is not quite sure what he is talking about. "Can you summarize the benefits and how we can use it?" asks the CEO.

How can you get data out from multiple tables in a database.

- What are foreign keys?
- Which types of joins are there?

Your output is supposed to be:

- A presentation that shows what joins and foreign keys are and how they can be used
- A working example of SQL join codes that joins several tables

The Senior Developer hands you a database for the Dashboard prototype you made last week that he quickly created ("CarParkr.sql). Use this as your basis.

He also provides you with this simple join statement to get you started.

```
SELECT * FROM `data`  
JOIN `garages`  
ON `data`.`garageCode` = `garages`.`garageCode`
```

Suggested Resources:

<http://www.sql-join.com/sql-join-types/>

<http://www.dofactory.com/sql/join>

https://www.w3schools.com/sql/sql_foreignkey.asp

[https://technet.microsoft.com/en-us/library/ms175464\(v=sql.105\).aspx](https://technet.microsoft.com/en-us/library/ms175464(v=sql.105).aspx)

<https://www.tutorialspoint.com/sql/sql-foreign-key.htm>

Topic 3 - CSS Grids

There are some rumours going around the office that in the new CSS specs there is something about a grid system. "Does this mean that there no longer will be a need for using frameworks like bootstrap" asks the Design Lead.

Try to answer the following:

- What is the CSS grid about
- How can it be used

Your output is supposed to be:

- A presentation that shows how CSS grids works
- Some example layouts done using CSS grids that can serve as a boilerplate for new projects

The Key Account Manager is anxious to know whether this is something he can sell to the client. Is there enough browser support for this?

Hint: check out caniuse.com

Suggested Resources:

<https://www.w3.org/TR/css3-grid-layout/>

<https://css-tricks.com/snippets/css/complete-guide-grid/>

<http://gridbyexample.com/examples/>

Topic 4 - CSS animation of SVG

The Frontend Developer wants to introduce CSS animations into his workflow and he has been playing with it at home. But the Design Lead is not quite sure if that is an actual possibility to use in client projects or just something to play with.

Your output is supposed to be:

- A presentation showing the basics of SVG animation with CSS
- Some example code that shows a few animations, maybe even as a boilerplate that can be used for projects

Suggested Resources:

<https://jonsuh.com/blog/animate-svg-with-css/>

<https://www.smashingmagazine.com/2014/11/styling-and-animating-svgs-with-css/>

<http://snapsvg.io/>

<http://www.hongkiat.com/blog/advanced-svg-animation-css/>

<https://css-tricks.com/animating-svg-css/>