

Business Intelligence Web Portal

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Project Description

Senion is a company that work with indoor positioning. One of the products they are developing is Senion IPS that is an indoor location system as well as Senion At Work which is a solution for smart offices.

In both of these products Senion collect data from the user. This data is analysed by the employees at Senion and the solutions from the analysis is then used when Senion continue to develop their products. This data is collected in the internal Business Intelligence Web Portal.

The goal of this project was to continue developing the Business Intelligence Web Portal to make the data even more easy to analyse. The secondary goal was to translate files using class components to use function components.

Implementation

The project had two different scopes. The first one focused on visualization and the second one focused on function components. Both parts were written in TypeScript and React.

Visualization

To visualize the date in figures, the library D3 was used. D3 is an open source library written in JavaScript. When the project was starting the portal had a scrollbar list and some bar chart data that showed different types of collected data.

During the project

- two new pie charts were added to give a fast overview of some data.
- the scrollbar list continued to be developed with pages and sorted the data even more.
- the sorting of the bar chart continued to be developed to give more relevant information for Senion.
- the whole page was made responsive to be adaptive to both small screens like tablets as well as big screens like computers.

Functional components

Most of Senions files were written with class components but Senion wanted to start working with functional components instead. After a training session held by one of the employees, the job was to convert class components to functional components. That was done by removing the render function and other lifecycles methods and instead using UseState and UseEffect methods. See the figure for a code example.

Results

The result of the project is a more interactive Business Intelligence Web Portal that shows more relevant information for the employees at Senion. The web portal is also responsive so all the data in the web portal can be seen on a tablet. Also all the code to the portal is now using functional components.

```
//FROM
import React from "react"
class CountClass extends React.Component {
  constructor(){
    super();
    this.state={
      count:0
    };
  }
  increase(){
    this.setState({count: this.state.count + 1})
  }
  render(){
    return <h1>{this.count}</h1>;
  }
}

// TO
import React, {useState} from "react";
const CountFunctional = () => {
  const [count, setCount] = useState(0);
  const increase=()=>{
    setCount(count + 1);
  }
  return <h1>{count}</h1>;
}
```

Conclusions

- The improvement of the web portal made the data more clear for the employees.
- It was easier to work with functional components since it makes the code more clear to read.