이승아 그래프과제

> 2022-04-01

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<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <style>
        .chart{
            display: block;
            float: left;
            ;
            padding: 50%;
            box-sizing: border-box;
        }

        .chart-item{
            width: auto;
            height: 320px;
        }
    </style>
</head>
<body>
    <h1>학과의 학생 정보</h1>
    <p>
        <a href="http://www.chartjs.org"></a>
    </p>
    <hr/>

    <div class="chart">
        <h2>학과별 학생 수</h2>
        <div class="chart-item">
            <canvas id="mychart1"></canvas>
        </div>
    </div>
    <div class="chart">
        <h2>학년에 따른 평균 나이 변화</h2>
        <div class="chart-item">
            <canvas id="mychart2"></canvas>
        </div>
    </div>
    <div class="chart">
        <h2>학년별 평균 키와 평균 몸무게</h2>
        <div class="chart-item">
            <canvas id="mychart3"></canvas>
        </div>
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    </div>
    <!--학생 자료 불러오기-->
    <script  src='./dataset.js'></script>

    <!-- 차트 데이터 불러오기 -->
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/Chart.js/3.7.1/chart.min.js"></script>




        <script>
            const student_info = student;



            /*  각 항목을 분할 저장을 위한 배열 */
                const grades = [];
                const birthday = [];
                const height_info =[];
                const weight_info = [];
                const subject = [];

                /* 항목 분할 */
                for (let i=0; i<student_info.length; i++){
                    grades[i]= student_info[i].grade;
                    birthday[i]= student_info[i].birthdate;
                    height_info[i]= student_info[i].height;
                    weight_info[i]= student_info[i].weight;
                    subject[i]= student_info[i].deptno;

                };

                for(let j=0; j<birthday.length; j++){
                /* 학생별 나이 구하기  */
                const date = new Date();
                const today = date.getFullYear();
                const yy = birthday[j] +'';
                const age= yy.substring(0,4);
                const studentAge = today-age+1;

            };

                /* 중복 학과 제거 */
                // let department  = [...new Set(subject)];
                const department = subject.filter((v,i,arr)=> arr.indexOf(v)===i);
                // console.log(department);


                /* 학과별 인원수 구하기 */
                // let studentCount ={'컴퓨터과':0, '정보통신과':0, '데이터통계
과':0};
                // for(let depart of  department){
                //     studentCount[depart]++;
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                // }

                const studentCount =subject.reduce((acc, cur)=>{
                    acc[cur]= (acc[cur]||0) + 1;
                    return acc;
                }, {});
                // console.log(studentCount);


               //그래프가 표시된 캔버스 영역
                const mychart1 = document.getElementById('mychart1');
                const mychart2 = document.getElementById('mychart2');
                const mychart3 = document.getElementById('mychart3');


                /* 학과별 학생 수 그래프*/
            new Chart(mychart1,{
                    type: 'bar',
                    date: {
                        labels: department,
                        datasets:[
                            {
                                label:'학생 수',
                                data: studentCount,
                                borderWidth:0.5,
                                borderColor: ['rgba(111, 183,214, 1)', 'rgba(249,
140, 182,1)', 'rgba(225, 237,81,1)'],
                                backgroundColor:['rgba(111, 183,214, 0.2)',
'rgba(249,240, 182, 0.2)', 'rgba(225, 237,81,0.2)'],
                            }
                        ],
                    },
                    options:{
                        maintainAspectRatio: false,
                        indexAxis:'x',
                    },
                });
        </script>
    </body>
</html>
```