Laboratorijske vježbe iz predmeta Vizualizacija Podataka

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Zadatak 1

e-Građani - statistika

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Skup podataka sadrži najzanimljivije statistike sustava e-Građani. Osim samog broja korisnika sustava e-Građani, možete pronaći podatke o broju e-Građana po županijama (prema mjestu prebivališta), koje su najkorištenije usluge i podatke o korištenim vjerodajnicama za pristup sustavu.

Resursi: "Korisnici sustava e-Građani po županijama"

Preuzmi | Preuzmi iz predmemorije

Korisnici sustava e-Građani po županijama

Pregled

Pregled je trenutno dostupan za datoteka poput CSV, tablice i teksta.

Zupanija	BrojKorisnika	Udjel	Textbox14	Textbox15
Grad Zagreb	257.573	30,67%	839.873	99,99%
Splitsko-dalmatinska	74.408	8,86%	839.873	99,99%
Primorsko-goranska	64.912	7,73%	839.873	99,99%
Zagrebačka	59.680	7,11%	839.873	99,99%
Osječko-baranjska	47.031	5,60%	839.873	99,99%
Istarska	45.909	5,47%	839.873	99,99%
Varaždinska	33.438	3,98%	839.873	99,99%
Zadarska	26.755	3,19%	839.873	99,99%
Sisačko-moslavačka	24.945	2,97%	839.873	99,99%
Krapinsko-zagorska	22.565	2,69%	839.873	99,99%

Dobijemo csv oblika:

index.html | Preview 'I_ZupanijeEgradjani.csv'

Zupanija	Broj Korisnika	Udjel	Textbox14	Textbox15
Grad Zagreb	257.57	30,67%	839.87	99,99%
Splitsko-dalmati	74.41	8,86%	839.87	99,99%
Primorsko-gora	64.91	7,73%	839.87	99,99%
Zagrebačka	59.68	7,11%	839.87	99,99%
Osječko-baranjs	47.03	5,60%	839.87	99,99%
Istarska	45.91	5,47%	839.87	99,99%
Varaždinska	33.44	3,98%	839.87	99,99%
Zadarska	26.76	3,19%	839.87	99,99%
Sisačko-moslava	24.95	2,97%	839.87	99,99%
Krapinsko-zago	22.57	2,69%	839.87	99,99%
Vukovarsko-srije	22.29	2,65%	839.87	99,99%
Međimurska	21.28	2,53%	839.87	99,99%
Brodsko-posavs	19.82	2,36%	839.87	99,99%
Dubrovačko-ner	19.43	2,31%	839.87	99,99%
Karlovačka	18.43	2,19%	839.87	99,99%
Koprivničko-križ	18.36	2,19%	839.87	99,99%
Bjelovarsko-bilo	14.91	1,78%	839.87	99,99%
Šibensko-kninsk	14.31	1,70%	839.87	99,99%
Virovitičko-podr	10.85	1,29%	839.87	99,99%
Požeško-slavons	9.33	1,11%	839.87	99,99%
Nepoznato	7.34	0,87%	839.87	99,99%
Ličko-senjska	6.31	0,75%	839.87	99,99%

Ne trebaju nam zadnja dva stupca te na kraju imamo:

index.html | Preview 'I_ZupanijeEgradjani_clean.csv'

Zupanija	Broj Korisnika	Udjel
Grad Zagreb	257.57	30,67%
Splitsko-dalmati	74.41	8,86%
Primorsko-gora	64.91	7,73%
Zagrebačka	59.68	7,11%
Osječko-baranjs	47.03	5,60%
Istarska	45.91	5,47%
Varaždinska	33.44	3,98%
Zadarska	26.76	3,19%
Sisačko-moslava	24.95	2,97%
Krapinsko-zago	22.57	2,69%
Vukovarsko-srije	22.29	2,65%
Međimurska	21.28	2,53%
Brodsko-posavs	19.82	2,36%
Dubrovačko-ner	19.43	2,31%
Karlovačka	18.43	2,19%
Koprivničko-križ	18.36	2,19%
Bjelovarsko-bilo	14.91	1,78%
Šibensko-kninsk	14.31	1,70%
Virovitičko-podr	10.85	1,29%
Požeško-slavons	9.33	1,11%
Nepoznato	7.34	0,87%
Ličko-senjska	6.31	0,75%

Moramo to pretvoriti u JSON oblik. To postižemo koristeći python skriptu:

```
import pandas as pd

data = pd.read_csv("I_ZupanijeEgradjani.csv")
print(data)

data.to_json("I_ZupanijeEgradjani_clean.json")
```

Nakon pokretanja skripte dobijemo:

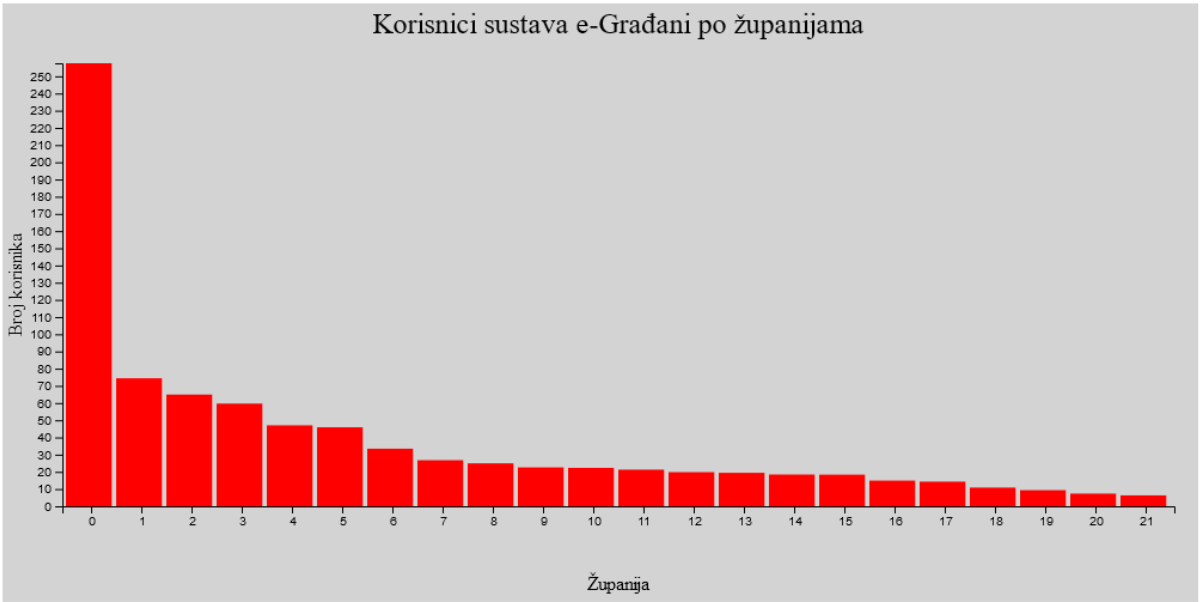
```
data = {
            "Zupanija": {
                0: "Grad Zagreb",
                1: "Splitsko-dalmatinska",
```

```
            2: "Primorsko-goranska",
            3: "Zagreba\u010dka",
            4: "Osje\u010dko-baranjska",
            5: "Istarska",
            6: "Vara\u017edinska",
            7: "Zadarska",
            8: "Sisa\u010dko-moslava\u010dka",
            9: "Krapinsko-zagorska",
            10: "Vukovarsko-srijemska",
            11: "Me\u0111imurska",
            12: "Brodsko-posavska",
            13: "Dubrova\u010dko-neretvanska",
            14: "Karlova\u010dka",
            15: "Koprivni\u010dko-kri\u017eeva\u010dka",
            16: "Bjelovarsko-bilogorska",
            17: "\u0160ibensko-kninska",
            18: "Viroviti\u010dko-podravska",
            19: "Po\u017ee\u0161ko-slavonska",
            20: "Nepoznato",
            21: "Li\u010dko-senjska"
        }, "BrojKorisnika": {
            0: 257.573,
            1: 74.408,
            2: 64.912,
            3: 59.68,
            4: 47.031,
            5: 45.909,
            6: 33.438,
            7: 26.755,
            8: 24.945,
            9: 22.565,
            10: 22.289,
            11: 21.279,
            12: 19.819,
            13: 19.427,
            14: 18.433,
            15: 18.362,
            16: 14.912,
            17: 14.309,
            18: 10.846,
            19: 9.33,
            20: 7.341,
            21: 6.31
        }, "Udjel": {
            0: "30,67%",
            1: "8,86%",
            2: "7,73%",
            3: "7,11%",
```

```
            4: "5,60%",
            5: "5,47%",
            6: "3,98%",
            7: "3,19%",
            8: "2,97%",
            9: "2,69%",
            10: "2,65%",
            11: "2,53%",
            12: "2,36%",
            13: "2,31%",
            14: "2,19%",
            15: "2,19%",
            16: "1,78%",
            17: "1,70%",
            18: "1,29%",
            19: "1,11%",
            20: "0,87%",
            21: "0,75%"
        }
    }
```

Što su naši podatci u pravilnom JSON obliku. Nije moguće korisitit DataWrangler bez ulogiranja pa ga nisam koristio. Podatci se moraju staviti unutar <script> elementa jer inace internet pretraživač odbija učitati ako se .json datoteka nalazi u istoj lokaciji kao i .html datoteka!

Zadatak 2.



Kod:

```
<!DOCTYPE html>
<html lang="en">
```

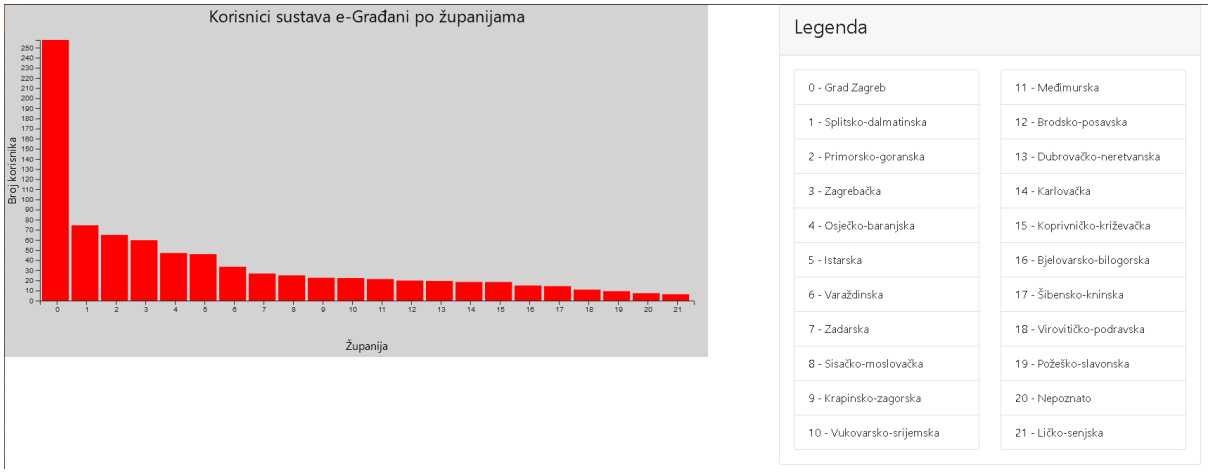
```
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>LV2</title>
    <script src="https://d3js.org/d3.v5.min.js"></script>
</head>

<body>
    <script>
        data = {
            "Zupanija": {
                0: "Grad Zagreb",
                1: "Splitsko-dalmatinska",
                2: "Primorsko-goranska",
                3: "Zagreba\u010dka",
                4: "Osje\u010dko-baranjska",
                5: "Istarska",
                6: "Vara\u017edinska",
                7: "Zadarska",
                8: "Sisa\u010dko-moslava\u010dka",
                9: "Krapinsko-zagorska",
                10: "Vukovarsko-srijemska",
                11: "Me\u0111imurska",
                12: "Brodsko-posavska",
                13: "Dubrova\u010dko-neretvanska",
                14: "Karlova\u010dka",
                15: "Koprivni\u010dko-kri\u017eeva\u010dka",
                16: "Bjelovarsko-bilogorska",
                17: "\u0160ibensko-kninska",
                18: "Viroviti\u010dko-podravska",
                19: "Po\u017ee\u0161ko-slavonska",
                20: "Nepoznato",
                21: "Li\u010dko-senjska"
            }, "BrojKorisnika": {
                0: 257.573,
                1: 74.408,
                2: 64.912,
                3: 59.68,
                4: 47.031,
                5: 45.909,
                6: 33.438,
                7: 26.755,
                8: 24.945,
                9: 22.565,
                10: 22.289,
                11: 21.279,
                12: 19.819,
                13: 19.427,
```

```
                14: 18.433,
                15: 18.362,
                16: 14.912,
                17: 14.309,
                18: 10.846,
                19: 9.33,
                20: 7.341,
                21: 6.31
            }, "Udjel": {
                0: "30,67%",
                1: "8,86%",
                2: "7,73%",
                3: "7,11%",
                4: "5,60%",
                5: "5,47%",
                6: "3,98%",
                7: "3,19%",
                8: "2,97%",
                9: "2,69%",
                10: "2,65%",
                11: "2,53%",
                12: "2,36%",
                13: "2,31%",
                14: "2,19%",
                15: "2,19%",
                16: "1,78%",
                17: "1,70%",
                18: "1,29%",
                19: "1,11%",
                20: "0,87%",
                21: "0,75%"
            }
        }
        console.log(Object.values(data.BrojKorisnika));
        console.log(Object.keys(data.BrojKorisnika).map(Number));
        var margin = {
            top: 50,
            bottom: 80,
            left: 50,
            right: 20
        };
        var width = 1000 - margin.left - margin.right;
        var height = 500 - margin.top - margin.bottom;
        var barPadding = 4;
        var barWidth = width/Object.keys(data.Zupanija).length - barPadding;

        var x = d3.scaleBand().domain(Object.keys(data.BrojKorisnika).map(Nu
mber)).rangeRound([0,width]);
```

```
        var y = d3.scaleLinear().domain([0,d3.max(Object.values(data.BrojKor
isnika))]).range([height,0]);

        var svg = d3.select("body")
            .append("svg")
            .attr("width", width + margin.left + margin.right)
            .attr("height", height + margin.top + margin.bottom)
            .style("background-color", "lightgray")
            .append("g")
            .attr("transform","translate(" + margin.left + "," + margin.top
+ ")");

        //var xAxis = d3.svg.axis().scale(x).orient("bottom").tickFormat(fun
ction(d,i){return i+1});
        var xAxis = d3.axisBottom(x).tickValues(x.domain());
        //var yAxis = d3.svg.axis().scale(y).orient(left).ticks(data.BrojKor
isnika.length);
        var yAxis = d3.axisLeft(y).ticks(Object.values(data.BrojKorisnika).l
ength);

        svg.append("g")
            .attr("class","x axis")
            .attr("transform","translate(0," + height + ")")
            .call(xAxis)
            .selectAll("text")
            .style("text-anchor","middle");

        svg.append("g")
            .append("text")
            .attr("transform", "translate(" + (width/2) + " ," + (height + m
argin.top + 20) + ")")
            .style("text-anchor", "middle")
            .text("Županija");

        svg.append("g")
            .attr("class", "y axis")
            .call(yAxis)

        svg.append("g")
            .append("text")
            .attr("transform", "rotate(-90)")
            .attr("y", 0 - margin.left)
            .attr("x",0 - (height / 2))
            .attr("dy", "1em")
            .style("text-anchor", "middle")
            .text("Broj korisnika");

        svg.append("g")
```

```
            .append("text")
            .attr("x",(width/2))
            .attr("y",0-(margin.top/2))
            .attr("text-anchor","middle")
            .style("font-size","1.5em")
            .text("Korisnici sustava e-Građani po županijama")

        var barchart = svg.selectAll("rect")
            .data(Object.values(data.BrojKorisnika))
            .enter()
            .append("rect")
            .attr("x",function(d,i){return x(i);})
            .attr("y",y)
            .attr("height",function(d){return height - y(d);})
            .attr("width",barWidth)
            .attr("fill","red")
    </script>
</body>

</html>
```

Zadatak 3.



Dodana je legenda za pojašnjenje x-osi.

U prethodnom zadatku je naveden kod za dodavanje x i y-osi te njihovih naziva.

Zadatak 4.

Vlastita ordinalna skala

```
var colors = d3.scaleOrdinal().range(['red','green','blue','purple','yellow'
,'cyan','darkgray','black','white','pink']);
```

Sadrži 10 članova te koristi se npr. na sljedeće načine:

```
var barchart = svg.selectAll("rect")
```

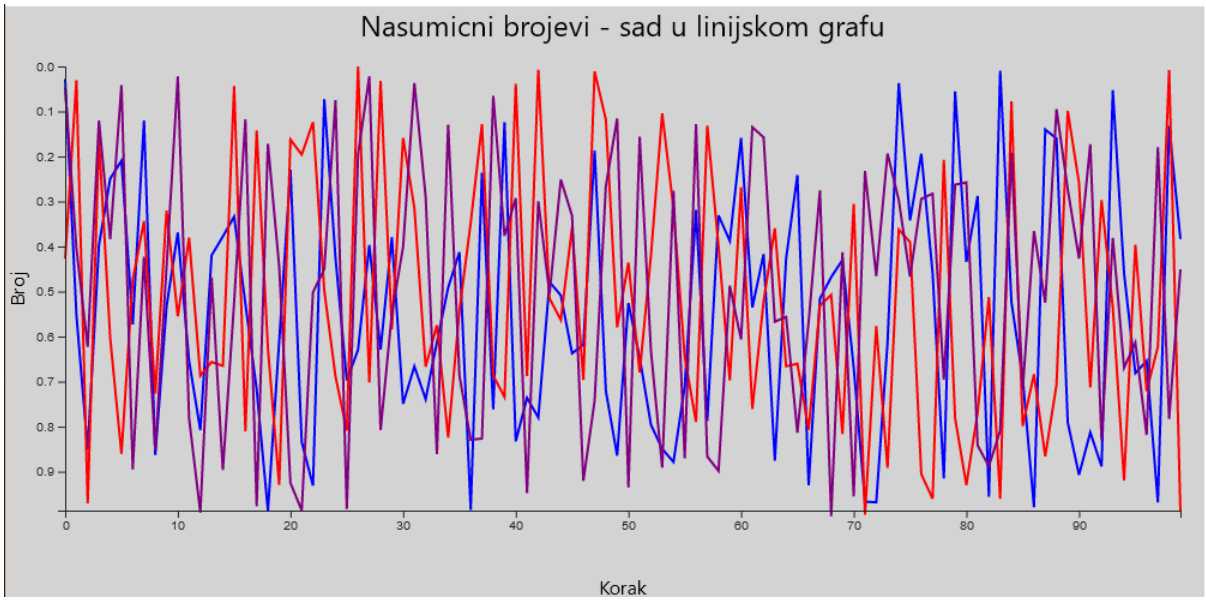
```
                    .data(Object.values(data.BrojKorisnika))
                    .enter()
                    .append("rect")
                    .attr("x",function(d,i){return x(i);})
                    .attr("y",y)
                    .attr("height",function(d){return height - y(d);})
                    .attr("width",barWidth)
                    .attr("fill",function(d,i){return colors(i)})
```

- Ovo je za bojanje bar-ova u grafu

```
<script>
    var temp = "border-width: thick; border-color: ";
    d3.selectAll("li")
    .data([0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21])
    .attr("style", function(d,i){return temp + colors(i)});
</script>
```

- Ovo je za bojanje legende za x-os

Zadatak 5.



Dodan je novi element za novi svg graf, cijeli kod zadatka:

```
<div class="col-xl-12" id="svg_container2">
    <script>
        data1 = {
            "0": {
                "0": 0.0280378689,
                "1": 0.5518955433,
                "2": 0.8512988665,
                "3": 0.3968983578,
                "4": 0.249146832,
                "5": 0.2093681998,
                "6": 0.5727880831,
                "7": 0.1201912418,
```

```
            "8": 0.8628530742,
            "9": 0.5333268858,
            "10": 0.3687153161,
            "11": 0.6538727759,
            "12": 0.8078153887,
            "13": 0.4197556208,
            "14": 0.377651126,
            "15": 0.3337643621,
            "16": 0.5267649565,
            "17": 0.7175105002,
            "18": 0.9864028735,
            "19": 0.6102315664,
            "20": 0.2295322259,
            "21": 0.8339455801,
            "22": 0.930938561,
            "23": 0.0728939006,
            "24": 0.425135286,
            "25": 0.6971020868,
            "26": 0.6293313586,
            "27": 0.3971657321,
            "28": 0.6287390032,
            "29": 0.3793754276,
            "30": 0.7493823758,
            "31": 0.666131164,
            "32": 0.7389671035,
            "33": 0.6129762618,
            "34": 0.4911304955,
            "35": 0.4124688468,
            "36": 0.9850433558,
            "37": 0.2360797011,
            "38": 0.7613893612,
            "39": 0.1237601776,
            "40": 0.832591392,
            "41": 0.7360319489,
            "42": 0.7796671841,
            "43": 0.4787814749,
            "44": 0.5084159912,
            "45": 0.637229801,
            "46": 0.6179689452,
            "47": 0.1868821914,
            "48": 0.7209582149,
            "49": 0.8644251343,
            "50": 0.5254868517,
            "51": 0.6466381194,
            "52": 0.7957904081,
            "53": 0.8494974208,
            "54": 0.878321115,
            "55": 0.7106119825,
```

```
            "56": 0.3187087849,
            "57": 0.7867898896,
            "58": 0.3308140032,
            "59": 0.387418028,
            "60": 0.1591088911,
            "61": 0.5356251733,
            "62": 0.4170890851,
            "63": 0.8755763111,
            "64": 0.4263469153,
            "65": 0.241232969,
            "66": 0.9303117638,
            "67": 0.5157697331,
            "68": 0.468056651,
            "69": 0.4296852348,
            "70": 0.6686992662,
            "71": 0.9665469003,
            "72": 0.9681020126,
            "73": 0.6141797443,
            "74": 0.0371462335,
            "75": 0.3419359343,
            "76": 0.1939450036,
            "77": 0.4578738771,
            "78": 0.9147250627,
            "79": 0.0556947323,
            "80": 0.4343741528,
            "81": 0.2877075594,
            "82": 0.9559092216,
            "83": 0.0097537512,
            "84": 0.5232755766,
            "85": 0.6926092601,
            "86": 0.979032414,
            "87": 0.1402672616,
            "88": 0.1600033296,
            "89": 0.7907210674,
            "90": 0.9069615512,
            "91": 0.8128246006,
            "92": 0.8882836481,
            "93": 0.052874965,
            "94": 0.4600339096,
            "95": 0.681255983,
            "96": 0.6539152468,
            "97": 0.9685057035,
            "98": 0.1318570794,
            "99": 0.3832844887
        }
    }
    data2 = {
        "0": {
```

```
            "0": 0.4264990092,
            "1": 0.0305212559,
            "2": 0.9704347047,
            "3": 0.160641736,
            "4": 0.60367127,
            "5": 0.8602696223,
            "6": 0.4738176526,
            "7": 0.3436766084,
            "8": 0.7263490199,
            "9": 0.3204304712,
            "10": 0.5548425695,
            "11": 0.3800567445,
            "12": 0.6868252775,
            "13": 0.656447787,
            "14": 0.6649218386,
            "15": 0.0432501555,
            "16": 0.8106665989,
            "17": 0.1419500889,
            "18": 0.6263884743,
            "19": 0.929287531,
            "20": 0.1624389894,
            "21": 0.1958629022,
            "22": 0.1238140287,
            "23": 0.4974621611,
            "24": 0.6886793833,
            "25": 0.8087987492,
            "26": 0.0000835236,
            "27": 0.7016469382,
            "28": 0.0323093473,
            "29": 0.583914273,
            "30": 0.1587239176,
            "31": 0.3142217685,
            "32": 0.6669182155,
            "33": 0.5746582399,
            "34": 0.8239924985,
            "35": 0.5421083712,
            "36": 0.3472196064,
            "37": 0.1282328464,
            "38": 0.6865651407,
            "39": 0.7341773295,
            "40": 0.0385454066,
            "41": 0.6877911504,
            "42": 0.007136976,
            "43": 0.5153227048,
            "44": 0.5631738278,
            "45": 0.3569055069,
            "46": 0.6960215071,
            "47": 0.0108422227,
```

```
            "48": 0.1184463061,
            "49": 0.5794494614,
            "50": 0.4357093064,
            "51": 0.6796601204,
            "52": 0.4199136068,
            "53": 0.1044500008,
            "54": 0.315452007,
            "55": 0.645515792,
            "56": 0.7895303797,
            "57": 0.131291479,
            "58": 0.3993920975,
            "59": 0.6976495525,
            "60": 0.2685246338,
            "61": 0.761036231,
            "62": 0.5216675554,
            "63": 0.3593234427,
            "64": 0.6658552415,
            "65": 0.6603351115,
            "66": 0.8068750512,
            "67": 0.5310254063,
            "68": 0.5074796308,
            "69": 0.816234109,
            "70": 0.3050470519,
            "71": 0.9953843733,
            "72": 0.5765594012,
            "73": 0.8915551425,
            "74": 0.3624758112,
            "75": 0.3902463082,
            "76": 0.9054525006,
            "77": 0.9600677139,
            "78": 0.2073604845,
            "79": 0.7811454221,
            "80": 0.9297146806,
            "81": 0.7685855243,
            "82": 0.5120106232,
            "83": 0.9601802254,
            "84": 0.0770772391,
            "85": 0.7985941454,
            "86": 0.6837225993,
            "87": 0.8659507857,
            "88": 0.7070436769,
            "89": 0.0989471902,
            "90": 0.2591647336,
            "91": 0.712988162,
            "92": 0.2970615905,
            "93": 0.5357862324,
            "94": 0.9196454387,
            "95": 0.3958056413,
```

```
            "96": 0.7206012006,
            "97": 0.6226995395,
            "98": 0.007786265,
            "99": 0.9893491968
        }
    }
    data3 = {
        "0": {
            "0": 0.0479354484,
            "1": 0.4041874379,
            "2": 0.6229554257,
            "3": 0.1203409617,
            "4": 0.3839493681,
            "5": 0.0412983273,
            "6": 0.8949954895,
            "7": 0.4225242021,
            "8": 0.8523734656,
            "9": 0.4460182752,
            "10": 0.0219304359,
            "11": 0.7809368479,
            "12": 0.9907244735,
            "13": 0.4689694824,
            "14": 0.8965579885,
            "15": 0.5239689691,
            "16": 0.1173547673,
            "17": 0.976821394,
            "18": 0.1718117066,
            "19": 0.4447804576,
            "20": 0.9251656991,
            "21": 0.9860895511,
            "22": 0.5014126973,
            "23": 0.4505325142,
            "24": 0.075026595,
            "25": 0.9830667387,
            "26": 0.1951646445,
            "27": 0.0221988022,
            "28": 0.8076124802,
            "29": 0.5494812621,
            "30": 0.400435127,
            "31": 0.0369890525,
            "32": 0.2889968384,
            "33": 0.8607360229,
            "34": 0.129376081,
            "35": 0.6865401178,
            "36": 0.8292769062,
            "37": 0.8265179828,
            "38": 0.0653529458,
            "39": 0.3760291495,
```

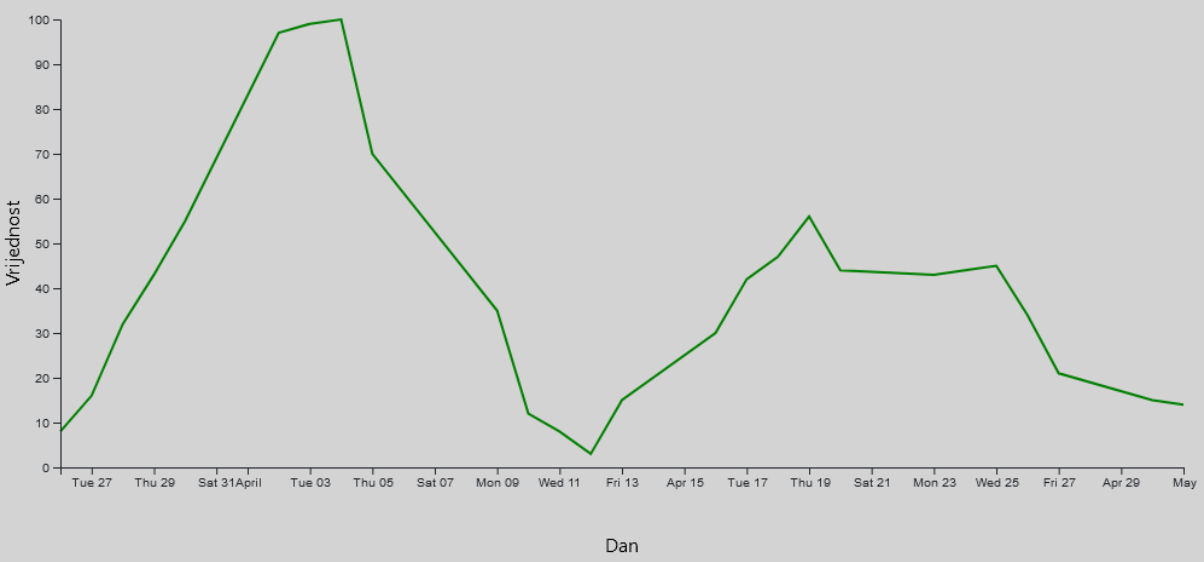
```
            "40": 0.2926186806,
            "41": 0.9477287589,
            "42": 0.2993598824,
            "43": 0.5053213241,
            "44": 0.2511530037,
            "45": 0.3318419115,
            "46": 0.9203370565,
            "47": 0.7425082278,
            "48": 0.2657765592,
            "49": 0.1154258452,
            "50": 0.9347734963,
            "51": 0.1561347188,
            "52": 0.6312239349,
            "53": 0.8909654732,
            "54": 0.2760242378,
            "55": 0.870583816,
            "56": 0.1278575879,
            "57": 0.8664182345,
            "58": 0.8983137499,
            "59": 0.4869684837,
            "60": 0.6063171863,
            "61": 0.134927541,
            "62": 0.1574947704,
            "63": 0.5668919178,
            "64": 0.5563404267,
            "65": 0.813239779,
            "66": 0.5669990629,
            "67": 0.275187172,
            "68": 0.998838164,
            "69": 0.4126242566,
            "70": 0.9547571346,
            "71": 0.2321425685,
            "72": 0.4653730722,
            "73": 0.1933759614,
            "74": 0.2969564128,
            "75": 0.4670064281,
            "76": 0.2941565482,
            "77": 0.2826043607,
            "78": 0.6954138652,
            "79": 0.2625891336,
            "80": 0.2577063176,
            "81": 0.8418400789,
            "82": 0.888028269,
            "83": 0.8089727657,
            "84": 0.1917557218,
            "85": 0.7170923313,
            "86": 0.3658588433,
            "87": 0.5247081636,
```

```
                "88": 0.0946605723,
                "89": 0.2728534682,
                "90": 0.4268240971,
                "91": 0.1729971885,
                "92": 0.8305381166,
                "93": 0.3807651411,
                "94": 0.6691418423,
                "95": 0.6135161241,
                "96": 0.8185385949,
                "97": 0.179313133,
                "98": 0.7826875531,
                "99": 0.4507236501
            }
        }
        var margin = {
            top: 50,
            bottom: 80,
            left: 50,
            right: 20
        };
        var width = 1000 - margin.left - margin.right;
        var height = 500 - margin.top - margin.bottom;
        var svg = d3.select("#svg_container2")
            .append("svg")
            .attr("width", width + margin.left + margin.right)
            .attr("height", height + margin.top + margin.bottom)
            .style("background-color", "lightgray")
            .append("g")
            .attr("transform", "translate(" + margin.left + "," + margin.top
 + ")");
        var x = d3.scaleLinear().domain([0,d3.max(Object.keys(data1[0]))]).r
ange([0,width]);
        var y = d3.scaleLinear().domain([0,d3.max(Object.values(data1[0]))])
.range([0,height]);
        var valueLine1 = d3.line().x(function(d,i) {return x(i)}).y(function
(d) {return y(d)});
        var valueLine2 = d3.line().x(function(d,i) {return x(i)}).y(function
(d) {return y(d)});
        var valueLine3 = d3.line().x(function(d,i) {return x(i)}).y(function
(d) {return y(d)});
        svg.append("path")
            .attr("class","line")
            .style("stroke","blue")
            .style("fill","none")
            .style("stroke-width","2")
            .attr("d",valueLine1(Object.values(data1[0])));

        svg.append("path")
```

```
            .data(Object.values(data2[0]))
            .attr("class","line")
            .style("stroke","red")
            .style("stroke-width","2")
            .style("fill","none")
            .attr("d",valueLine2(Object.values(data2[0])));

        svg.append("path")
            .data(Object.values(data3[0]))
            .attr("class","line")
            .style("stroke","purple")
            .style("fill","none")
            .style("stroke-width","2")
            .attr("d",valueLine3(Object.values(data3[0])));

        svg.append("g")
            .attr("transform","translate (0," + height + ")")
            .call(d3.axisBottom(x))
            .selectAll("text")
            .style("text-anchor","middle");

        svg.append("g")
            .call(d3.axisLeft(y));

        svg.append("g")
            .append("text")
            .attr("transform", "translate(" + (width / 2) + " ," + (height +
margin.top + 20) + ")")
            .style("text-anchor", "middle")
            .text("Korak");

        svg.append("g")
            .append("text")
            .attr("transform", "rotate(-90)")
            .attr("y", 0 - margin.left)
            .attr("x", 0 - (height / 2))
            .attr("dy", "1em")
            .style("text-anchor", "middle")
            .text("Broj");

        svg.append("g")
            .append("text")
            .attr("x", (width / 2))
            .attr("y", 0 - (margin.top / 2))
            .attr("text-anchor", "middle")
            .style("font-size", "1.5em")
            .text("Nasumicni brojevi - sad u linijskom grafu")
    </script>
```

```
</div>
```

Zadatak 6.



Kod zajendo sa korištenim podatcima:

```
<div class="row">
        <div class="col-xl-12" id="svg_container3">
            <script>
                data = [
                    {
                        "date": "1-May-12",
                        "value": 14
                    },
                    {
                        "date": "30-Apr-12",
                        "value": 15
                    },
                    {
                        "date": "27-Apr-12",
                        "value": 21
                    },
                    {
                        "date": "26-Apr-12",
                        "value": 34
                    },
                    {
                        "date": "25-Apr-12",
                        "value": 45
                    },
                    {
                        "date": "24-Apr-12",
                        "value": 44
```

```
        },
        {
            "date": "23-Apr-12",
            "value": 43
        },
        {
            "date": "20-Apr-12",
            "value": 44
        },
        {
            "date": "19-Apr-12",
            "value": 56
        },
        {
            "date": "18-Apr-12",
            "value": 47
        },
        {
            "date": "17-Apr-12",
            "value": 42
        },
        {
            "date": "16-Apr-12",
            "value": 30
        },
        {
            "date": "13-Apr-12",
            "value": 15
        },
        {
            "date": "12-Apr-12",
            "value": 3
        },
        {
            "date": "11-Apr-12",
            "value": 8
        },
        {
            "date": "10-Apr-12",
            "value": 12
        },
        {
            "date": "9-Apr-12",
            "value": 35
        },
        {
            "date": "5-Apr-12",
            "value": 70
```

```
                    },
                    {
                        "date": "4-Apr-12",
                        "value": 100
                    },
                    {
                        "date": "3-Apr-12",
                        "value": 99
                    },
                    {
                        "date": "2-Apr-12",
                        "value": 97
                    },
                    {
                        "date": "30-Mar-12",
                        "value": 55
                    },
                    {
                        "date": "29-Mar-12",
                        "value": 43
                    },
                    {
                        "date": "28-Mar-12",
                        "value": 32
                    },
                    {
                        "date": "27-Mar-12",
                        "value": 16
                    },
                    {
                        "date": "26-Mar-12",
                        "value": 8
                    }
                ]
                var width = 1000 - margin.left - margin.right;
                var height = 500 - margin.top - margin.bottom;
                var svg = d3.select("#svg_container2")
                    .append("svg")
                    .attr("width", width + margin.left + margin.right)
                    .attr("height", height + margin.top + margin.bottom)
                    .style("background-color", "lightgray")
                    .append("g")
                    .attr("transform", "translate(" + margin.left + "," + ma
rgin.top + ")");
                var parseTime = d3.timeParse("%d-%b-%y");

                var x = d3.scaleTime().range([0, width]);
                var y = d3.scaleLinear().range([height, 0]);
```

```
                var valueLine = d3.line()
                    .x(function (d) { return x(d.date) })
                    .y(function (d) { return y(d.value) });

                Object.keys(data).forEach(function(key){
                    data[key].date = parseTime(data[key].date);
                    data[key].value = +data[key].value;
                })
                console.log(data);

                x.domain(d3.extent(data, function (d) { return d.date; }));
                y.domain([0, d3.max(data, function(d) {return d.value;})]);
                console.log(valueLine(data));

                svg.append("path")
                    .attr("class", "line")
                    .style("stroke", "green")
                    .style("fill", "none")
                    .style("stroke-width", "2")
                    .attr("d", valueLine(data));

                svg.append("g")
                    .attr("transform", "translate (0," + height + ")")
                    .call(d3.axisBottom(x));

                svg.append("g")
                    .call(d3.axisLeft(y));

                svg.append("g")
                    .append("text")
                    .attr("transform", "translate(" + (width / 2) + " ," + (
height + margin.top + 20) + ")")
                    .style("text-anchor", "middle")
                    .text("Dan");

                svg.append("g")
                    .append("text")
                    .attr("transform", "rotate(-90)")
                    .attr("y", 0 - margin.left)
                    .attr("x", 0 - (height / 2))
                    .attr("dy", "1em")
                    .style("text-anchor", "middle")
                    .text("Vrijednost");
            </script>
        </div>
    </div>
```