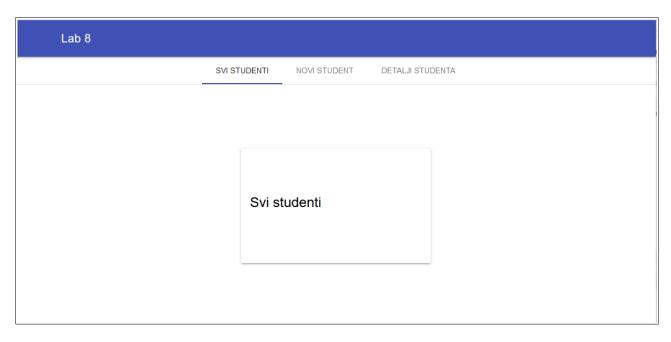
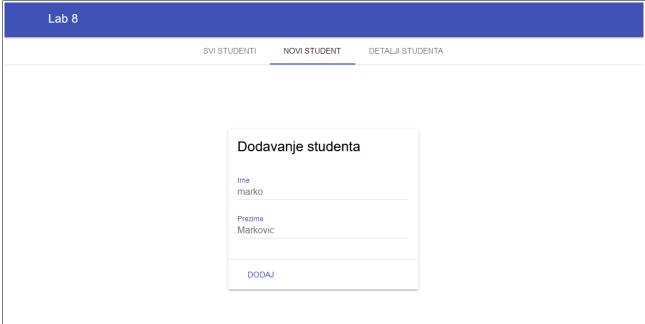
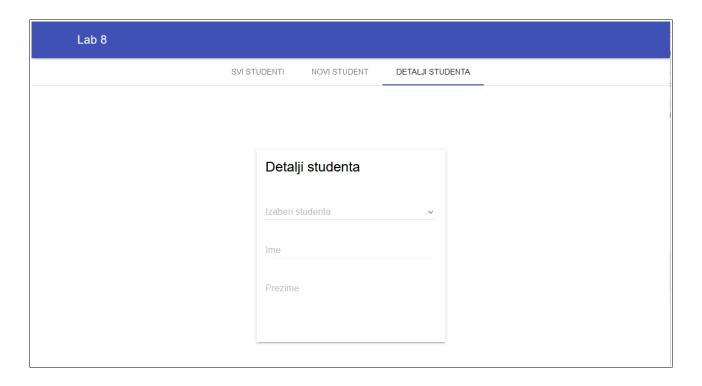
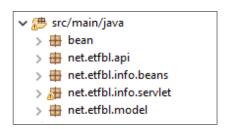
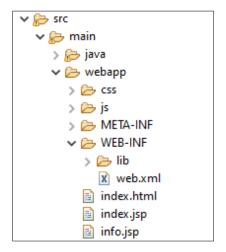
# ИНТЕРНЕТ ПРОГРАМИРАЊЕ ВЈЕЖБЕ-08-АЈАКС ПРЕГЛЕД И МАТЕРИЈАЛИ











# Линкови

```
css\info.css
css\style.css
index.html
index.jsp
info.jsp
js\info.js
js\script.js
META-INF\MANIFEST.MF
WEB-INF\lib\aopalliance-repackaged-2.5.0-b42.jar
WEB-INF\lib\cdi-api-1.1.jar
WEB-INF\lib\el-api-2.2.jar
WEB-INF\lib\hk2-api-2.5.0-b42.jar
WEB-INF\lib\hk2-locator-2.5.0-b42.jar
WEB-INF\lib\hk2-utils-2.5.0-b42.jar
WEB-INF\lib\javassist-3.22.0-CR2.jar
WEB-INF\lib\javax.activation-api-1.2.0.jar
WEB-INF\lib\javax.annotation-api-1.2.jar
WEB-INF\lib\javax.inject-1.jar
WEB-INF\lib\javax.inject-2.5.0-b42.jar
WEB-INF\lib\javax.json-1.1.jar
WEB-INF\lib\javax.json-api-1.1.jar
WEB-INF\lib\javax.json.bind-api-1.0.jar
WEB-INF\lib\javax.servlet-api-3.0.1.jar
WEB-INF\lib\javax.ws.rs-api-2.1.jar
WEB-INF\lib\jaxb-api-2.2.7.jar
WEB-INF\lib\jboss-interceptors-api 1.1 spec-1.0.0.Beta1.jar
WEB-INF\lib\jersey-client.jar
WEB-INF\lib\jersey-common.jar
WEB-INF\lib\jersey-container-servlet-core.jar
WEB-INF\lib\jersey-container-servlet.jar
WEB-INF\lib\jersey-hk2.jar
WEB-INF\lib\jersey-media-jaxb.jar
WEB-INF\lib\jersey-media-json-binding.jar
WEB-INF\lib\jersey-media-sse.jar
WEB-INF\lib\jersey-server.jar
WEB-INF\lib\json-20180130.jar
WEB-INF\lib\jsr250-api-1.0.jar
WEB-INF\lib\org.osgi.core-4.2.0.jar
WEB-INF\lib\osgi-resource-locator-1.0.1.jar
WEB-INF\lib\persistence-api-1.0.jar
WEB-INF\lib\validation-api-1.1.0.Final.jar
WEB-INF\lib\yasson-1.0.jar
WEB-INF\web.xm1
```



- ᡌ aopalliance-repackaged-2.5.0-b42.jar
- 🔬 cdi-api-1.1.jar
- 🔬 el-api-2.2.jar
- 🕍 hk2-api-2.5.0-b42.jar
- hk2-locator-2.5.0-b42.jar
- 🔬 hk2-utils-2.5.0-b42.jar
- javassist-3,22,0-CR2,jar
- 👔 javax.activation-api-1.2.0.jar
- 👔 javax.annotation-api-1.2.jar
- 🕌 javax.inject-1.jar
- javax.inject-2.5.0-b42.jar
- 🔬 javax.json.bind-api-1.0.jar
- 🕌 javax.json-1.1.jar
- 👔 javax.json-api-1.1.jar
- 🔬 javax.servlet-api-3.0.1.jar
- 👔 javax.ws.rs-api-2.1.jar
- 🎉 jaxb-api-2.2.7.jar
- jboss-interceptors-api\_1.1\_spec-1.0.0.Beta1
- 🕌 jersey-client.jar
- 🕌 jersey-common.jar
- jersey-container-servlet.jar
- 👔 jersey-container-servlet-core.jar
- 🔬 jersey-hk2.jar
- 🔬 jersey-media-jaxb.jar
- jersey-media-json-binding.jar
- jersey-media-sse.jar
- 🕌 jersey-server.jar
- 🕌 json-20180130.jar
- 🕌 jsr250-api-1.0.jar
- org.osgi.core-4.2.0.jar
- 🐇 osgi-resource-locator-1.0.1.jar
- 🔬 persistence-api-1.0.jar
- 🔬 validation-api-1.1.0.Final.jar
- 🕌 yasson-1.0.jar
- x web.xml

## WEB.XML

```
1 <?xml version="1.0" encoding="UTF-8"?>
 2⊖ <web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"
            xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
            xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
 5
            http://xmlns.jcp.org/xml/ns/javaee/web-app 3 1.xsd"
            version="3.1">
7
       <display-name>Lab08</display-name>
8⊖
8
       <welcome-file-list>
           <welcome-file>index.html</welcome-file>
9
10
           <welcome-file>index.htm</welcome-file>
11
           <welcome-file>index.jsp</welcome-file>
           <welcome-file>default.html</welcome-file>
12
13
           <welcome-file>default.htm</welcome-file>
           <welcome-file>default.jsp</welcome-file>
14
       </welcome-file-list>
15
       <servlet>
16⊖
17
           <servlet-name>Jersey RESTful Application</servlet-name>
           <servlet-class>org.glassfish.jersey.servlet.ServletContainer</servlet-class>
18
19⊖
           <init-param>
20
               <param-name>jersey.config.server.provider.packages</param-name>
21
               <param-value>net.etfbl.api</param-value>
22
           </init-param>
23
       </servlet>
24⊝
       <servlet-mapping>
25
           <servlet-name>Jersey RESTful Application
26
           <url-pattern>/api/*</url-pattern>
27
       </servlet-mapping>
28 </web-app>
```

#### INDEX.HTML

```
1 <!DOCTYPE html>
 2@ <html>
 3@ <head>
 4 <meta charset="UTF-8">
 5 <title>Lab8</title>
 6 k rel="stylesheet"
       href="https://fonts.googleapis.com/icon?family=Material+Icons">
8 k rel="stylesheet"
       href="https://code.getmdl.io/1.3.0/material.indigo-pink.min.css">
9
10 <script defer src="https://code.getmdl.io/1.3.0/material.min.js"></script>
11 <script src="js/script.js"></script>
12 <link rel="stylesheet" href="css/style.css">
13 </head>
14⊖ <body onload="init()">
15⊝
       <header class="mdl-layout_header">
          <div class="mdl-layout_header-row">
16⊖
17
              <span class="mdl-layout-title">Lab 8</span>
18
           </div>
       </header>
19
20⊝
       <div class="mdl-tabs mdl-js-tabs mdl-js-ripple-effect">
21⊝
           <div class="mdl-tabs__tab-bar">
               <a href="#all-students-panel" class="mdl-tabs_tab is-active">Svi studenti</a> <a</pre>
22⊝
                  href="#new-student-panel" class="mdl-tabs tab">Novi student</a> <a
23⊖
                  href="#details-panel" class="mdl-tabs tab">Detalji studenta</a>
24
           </div>
25
26
           <div class="mdl-tabs panel is-active" id="all-students-panel">
27⊝
28⊝
              <div class="card-container mdl-card mdl-shadow--2dp">
29⊝
                  <div class="mdl-card title mdl-card--expand">
30
                      <h2 class="mdl-card_title-text">Svi studenti
31
32⊝
                  <div class="mdl-card_supporting-text">
33⊕
                      34
                      </div>
35
              </div>
36
37
           </div>
```

```
<div class="mdl-tabs__panel" id="new-student-panel">
   <div class="card-container mdl-card mdl-shadow--2dp">
     <div class="mdl-card title mdl-card--expand"</pre>
         <h2 class="mdl-card_title-text">Dodavanje studenta</h2>
      </div>
      <div class="mdl-card_supporting-text">
         <form id="new-student-form">
            required="required" autocomplete="off">
            </div>
            </div>
         </form>
      </div>
      <div class="mdl-card actions mdl-card--border">
         <a onclick="addStudent()
            class="mdl-button mdl-button--colored mdl-js-button mdl-js-ripple-effect">
            Dodaj </a>
      </div>
   </div>
</div>
```

```
62⊖
64⊖
65
66
         67⊝
68⊜
69⊝
70
71
            </select>
72
            <label class="mdl-textfield_label" for="student-selection">Izaberi studenta</label>
73
          </div>
          749
75
76
77
          </div>
          78⊝
79
80
81
82
          Rul class="mdl-list students-list" id="grade-list">
83⊜
84
85
         </div>
86
87
       </div>
88
     </div>
   </div>
89
90 </body>
91 </html>
```

## INFO.JSP

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"</pre>
 2
       pageEncoding="ISO-8859-1"%
 3 <!DOCTYPE html>
 4⊖ <html>
 5⊖ <head>
 6 <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1" />
 7 <title>Quiz</title>
8 <script type="text/javascript" src="https://code.jquery.com/jquery-3.3.1.min.js"></script>
9 <script type="text/javascript" src="js/info.js"></script>
10 10 10 10 </script type="text/css" />
11 </head>
12⊖ <body onload="pripremiFormu()">
13⊖
       14⊖
           15⊖
                   <div id="prezimeime">
16⊕
                       <form id="prvaForma">
17⊝
18⊖
                          19⊖
                                  Prezime korisnika:
20
21⊖
                                  <input type="text" name="prezime" id="prezime">
22
                                  23
24⊝
                              25
                                  Ime korisnika:
26
                                  <input type="text" name="ime" id="ime">
27
                              28⊝
                              <div id="porukaPrezime"></div>
29
30
                                   
                              31
32
                          </form>
33
34
                       <button id="unesiprezimeime">Dalie</button>
35
                   </div>
36
               37
```

```
<div id="adresa">
       <form id="drugaForma">
         Ulica:
              <input type="text" name="ulica" id="ulica">
            Broj:
              <input type="text" name="broj" id="broj">
            Grad:
              <input type="text" name="grad" id="grad">
            <div id="porukaAdresa"></div>
               
            </form>
       <button id="unesiadresu">Dalie/button>
    </div>
```

```
65⊜
     66⊖
        <div id="prikaz">
67⊝
68⊖
         69⊝
           70
             Prezime:
71
             72
           73⊝
           74
             Ime:
75
             76
           77⊝
           78
             Ulica:
79
             80
           81⊝
           82
             Broj:
83
             84
           85⊝
           86
             Grad:
87
             88
89
         </div>
90
      91
     92
   93
94
   <br />
95 </body>
96 </html>
```



# **INFO.CSS**

```
1⊖ body {
2    font-family: Arial, Helvetica, sans;
3    font-size: 8pt;
4 }
5    6⊖ td:first-of-type {
7    width: 20%;
8 }
9    10⊖ td:last-of-type {
L1    width: 80%;
12 }
```

# STYLE.CSS

```
1⊖ .card-container {
2     margin: 0 auto;
3     margin-top: 10%;
4 }
5
6⊖ .students-list {
7     max-height: 300px;
8     overflow-y: auto;
9 }
```

```
bean

FileListingBean.java

Het.etfbl.api

APIService.java

StudentService.java

Het.etfbl.info.beans

UserBean.java

Het.etfbl.info.servlet

MasterServlet.java

Het.etfbl.model

DataSource.java
```

# STUDENT.JAVA

```
package net.etfbl.model;
3 import java.util.HashMap;
5 public class Student {
6
7
        private Integer id;
       private String firstName;
8
       private String lastName;
 9
10
       private HashMap<String, Integer> grades;
11
12⊖
        public Student() {
13
14
15⊜
        public Student(int id) {
           this.id = id;
16
17
18
19⊝
       public Student(int id, String firstName, String lastName, HashMap<String, Integer> grades) {
20
           super();
21
           this.id = id;
22
           this.firstName = firstName;
23
           this.lastName = lastName;
24
           this.grades = grades;
25
        }
26
27⊝
       public Integer getId() {
28
           return id;
29
30
31⊝
        public void setId(Integer id) {
32
           this.id = id;
33
34
        public String getFirstName() {
35⊜
36
           return firstName;
37
38
39⊖
        public void setFirstName(String firstName) {
40
           this.firstName = firstName;
41
42
```

```
package net.etfbl.model;
3 import java.util.HashMap;
5 public class Student {
6
7
       private Integer id;
       private String firstName;
8
       private String lastName;
10
       private HashMap<String, Integer> grades;
11
       public Student() {
12⊖
13
14
15⊝
       public Student(int id) {
16
           this.id = id;
17
18
19⊖
       public Student(int id, String firstName, String lastName, HashMap<String, Integer> grades) {
20
           super();
21
           this.id = id;
22
           this.firstName = firstName;
23
           this.lastName = lastName;
24
           this.grades = grades;
25
       }
26
27⊝
       public Integer getId() {
28
           return id;
29
30
       public void setId(Integer id) {
31⊖
32
           this.id = id;
33
34
35⊜
       public String getFirstName() {
36
           return firstName;
37
38
       public void setFirstName(String firstName) {
39⊝
40
           this.firstName = firstName;
41
42
```

# DATA\_SOURCE.JAVA

```
package net.etfbl.model;
 3⊕ import java.util.ArrayList;
 6 public class DataSource {
 7
 8
         public ArrayList<Student> students = new ArrayList<>();
 9
         private static DataSource instance = null;
10
11⊝
         public static DataSource getInstance() {
12
              if (instance == null) {
13
                  instance = new DataSource();
14
15
             return instance;
16
         }
17
18⊖
         private DataSource() {
19
              System.out.println("Init demo data");
20
21
              HashMap<String, Integer> grades1 = new HashMap<>();
             grades1.put("Programski jezici 2", 8);
grades1.put("MDP", 10);
grades1.put("Internet programiranje", 9);
22
23
24
25
26
              HashMap<String, Integer> grades2 = new HashMap<>();
              grades2.put("Programski jezici 2", 6);
grades2.put("MDP", 7);
27
28
              grades2.put("Internet programiranje", 8);
29
30
             Student s1 = new Student(1, "Marko", "Markovic", grades1);
Student s2 = new Student(2, "Janko", "Jankovic", grades2);
31
32
33
34
              students.add(s1);
35
              students.add(s2);
36
         }
37 }
38
```

## USER\_BEAN.JAVA

```
package net.etfbl.info.beans;
   public class UserBean {
4
       private String prezime = "";
5
       private String ime = ""
 6
       private String ulica = "";
7
       private String broj = "";
8
       private String grad = "";
9
10
       public String getPrezime() {
11⊖
12
            return prezime;
13
14
15⊜
       public void setPrezime(String prezime) {
16
            this.prezime = prezime;
17
18
19⊖
       public String getIme() {
20
            return ime;
21
22
23⊖
       public void setIme(String ime) {
24
            this.ime = ime;
25
26
27⊝
       public String getUlica() {
28
            return ulica;
29
30
31⊖
       public void setUlica(String ulica) {
32
            this.ulica = ulica;
33
34
35⊝
       public String getBroj() {
36
            return broj;
37
38
39⊝
       public void setBroj(String broj) {
40
            this.broj = broj;
41
       }
```

```
public String getIme() {
       return ime;
   public void setIme(String ime) {
       this.ime = ime;
   public String getUlica() {
       return ulica;
   public void setUlica(String ulica) {
       this.ulica = ulica;
   public String getBroj() {
       return broj;
   public void setBroj(String broj) {
       this.broj = broj;
   public String getGrad() {
       return grad;
   public void setGrad(String grad) {
       this.grad = grad;
}
```

# MASTER SERVLET.JAVA

```
package net.etfbl.info.servlet;

import java.io.IOException;

@WebServlet("/info")

public class MasterServlet extends HttpServlet {

    @Override
    protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException {
        RequestDispatcher disp = req.getRequestDispatcher("./index.jsp");
        disp.forward(req, resp);
}
```

```
@Override
protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException {
    Enumeration<String> en = req.getParameterNames();
    if (!(en.hasMoreElements())) {
        PrintWriter pw = resp.getWriter();
pw.println("NOK");
        pw.close();
    } else {
        while (en.hasMoreElements()) {
            String parametar = en.nextElement();
if ("prezime".equals(parametar) || "ime".equals(parametar)) {
                // prva forma
                String prezime = req.getParameter("prezime");
                String ime = req.getParameter("ime");
                UserBean kb = new UserBean();
                kb.setPrezime(prezime);
                kb.setIme(ime);
                PrintWriter pw = resp.getWriter();
                if (prezime == null || ime == null || prezime.equals("") || ime.equals(""))
                    pw.println("NOK");
                else
                    pw.println("OK");
                req.getSession().setAttribute("korisnik", kb);
                pw.close();
            } else {
                HttpSession sess = (HttpSession) (req.getSession());
                UserBean kb = (UserBean) sess.getAttribute("korisnik");
                String ulica = req.getParameter("ulica");
                String broj = req.getParameter("broj");
String grad = req.getParameter("grad");
                kb.setUlica(ulica);
                kb.setBroj(broj);
                kb.setGrad(grad);
                PrintWriter pw = resp.getWriter();
                sess.setAttribute("korisnik", kb);
                if (ulica == null || broj == null || grad == null || ulica.equals("") || grad.equals("")
                        || broj.equals("
                                         "))
                    pw.println("NOK");
                else
                    pw.close();
          }
       }
   }
}
```

## STUDENT\_SERVICE.JAVA

```
package net.etfbl.api;
 3⊕ import java.util.ArrayList; ...
9 public class StudentService {
10
11
       DataSource data = DataSource.getInstance();
12
13⊖
        public ArrayList<Student> getStudents() {
14
            return data.students;
15
16
17⊝
        public Student getById(int id) {
            for (Student s : data.students) {
18
19
                if (s.getId() == id) {
20
                    return s;
21
22
23
            return new Student();
24
25
26⊖
        public boolean add(Student student) {
            student.setId(new Random().nextInt(100));
27
28
            return data.students.add(student);
29
30
31⊖
       public boolean update(Student student, int id) {
32
            int index = data.students.indexOf(new Student(id));
33
            if (index >= 0) {
34
                data.students.set(index, student);
35
                return true;
36
            } else {
37
                return false;
38
39
        }
40
41⊖
       public boolean remove(int id) {
42
            int index = data.students.indexOf(new Student(id));
            if (index >= 0) {
43
44
                data.students.remove(index);
45
                return true;
46
            } else {
47
                return false;
48
49
        }
50 }
51
```

#### API SERVICE.JAVA

```
package net.etfbl.api;
3⊕ import java.util.ArrayList;
17
   @Path("/studenti")
18
19
   public class APIService {
20
21
        StudentService service;
22
23⊖
        public APIService() {
24
            service = new StudentService();
25
26
27⊝
        @GET
28
        @Produces(MediaType.APPLICATION_JSON)
29
        public ArrayList<Student> getAll() {
30
            return service.getStudents();
31
32
33⊝
        @GET
        @Path("/{id}")
34
35
        @Produces(MediaType.APPLICATION_JSON)
36
        public Response getById(@PathParam("id") int id) {
37
            Student student = service.getById(id);
38
            if (student != null) {
39
                return Response.status(200).entity(student).build();
40
            } else {
41
                return Response.status(404).build();
42
43
        }
44
45⊝
        @POST
46
        @Consumes(MediaType.APPLICATION_JSON)
47
        @Produces(MediaType.APPLICATION_JSON)
48
        public Response add(Student student) {
49
            if (service.add(student)) {
50
                return Response.status(200).entity(student).build();
51
            } else {
52
                return Response.status(500).entity("Greska pri dodavanju").build();
53
54
        }
55
56⊖
        @PUT
57
        @Path("/{id}")
58
        @Consumes(MediaType.APPLICATION JSON)
59
        @Produces(MediaType.APPLICATION_JSON)
        public Response edit(Student student, @PathParam("id") int id) {
60
61
            if (service.update(student, id)) {
62
                return Response.status(200).entity(student).build();
63
64
            return Response.status(404).build();
65
        }
```

```
45⊝
        @POST
46
        @Consumes(MediaType.APPLICATION JSON)
47
        @Produces(MediaType.APPLICATION JSON)
48
        public Response add(Student student) {
49
            if (service.add(student)) {
50
                return Response.status(200).entity(student).build();
51
            } else {
52
                return Response.status(500).entity("Greska pri dodavanju").build();
53
54
        }
55
        @PUT
56⊖
        @Path("/{id}")
57
58
        @Consumes(MediaType.APPLICATION_JSON)
59
        @Produces(MediaType.APPLICATION_JSON)
        public Response edit(Student student, @PathParam("id") int id) {
60
            if (service.update(student, id)) {
61
62
                return Response.status(200).entity(student).build();
63
64
            return Response.status(404).build();
65
        }
66
67⊝
        @DELETE
68
        @Path("/{id}")
69
        public Response remove(@PathParam("id") int id) {
70
            if (service.remove(id)) {
71
                return Response.status(200).build();
72
73
            return Response.status(404).build();
74
        }
75
   }
76
```



```
1⊖ function pripremiFormu() {
2
        $("#adresatr").hide("fast");
        $("#prikaztr").hide("fast");
3
        $("#prezimetr").show();
4
5 }
6
7⊖ $(function() {
        $("#unesiprezimeime").click(unesiPrezimeIme);
9 });
10
11⊖ $(function() {
        $("#unesiadresu").click(unesiAdresu);
13 });
14
15
16⊖ function unesiPrezimeIme() {
17⊝
       $.ajax({
18
            type: "POST",
            url: "./info",
19
20
            data: $("#prvaForma").serialize(),
21
            success: function(text) { prikaziAdresu(text); },
22
            dataType: "html",
23
            cache: false
24
            });
25
26
27⊖ function unesiAdresu() {
28⊖
       $.ajax({
            type: "POST",
29
            url: "./info",
30
            data: $("#drugaForma").serialize(),
31
            success: function(text) { prikaziPodatke(text); },
32
33
            dataType: "html",
34
            cache: false
35
            });
36
37
38⊖ function prikaziAdresu(text) {
        if(text.indexOf("NOK")===0) {
    $("#porukaPrezime").html("Podaci nisu ispravno uneseni. Pokusajte ponovo.");
39⊝
40
41
            $("#porukaPrezime").css("color","red");
42
        else {
43Θ
            $("#prezimetr").slideUp(1000,function() {
44⊖
45
                $("#porukaPrezime").hide();
                $("#adresatr").slideDown();
46
47
            });
48
49
50
        }
51 }
```

```
53⊖ function prikaziPodatke(text) {
54⊖
       if(text.indexOf("NOK")===0) {
            $("#porukaAdresa").html("Podaci nisu ispravno uneseni. Pokusajte ponovo.");
55
            $("#porukaAdresa").css("color", "red");
56
57
       else {
58⊝
59⊝
            $("#adresatr").slideUp(1000,function() {
               $("#porukaAdresa").hide();
60
61
               var tekst=$.parseJSON(text);
               $("#imetd").html(tekst.i);
62
               $("#prezimetd").html(tekst.p);
63
64
               $("#ulicatd").html(tekst.u);
65
                $("#gradtd").html(tekst.g);
66
                $("#brojtd").html(tekst.b);
67
                $("#prikaztr").slideDown();
68
           });
69
       }
70
```

## SKRIPT.JS

```
var students = [];
 3⊖ function loadSelect() {
 4
         var elem = document.getElementById("student-selection");
 5⊜
          students.forEach(student=>{
 6
              var option = document.createElement("option");
 7
              option.text = student.firstName + '
                                                             " + student.lastName;
 8
              option.value = student.id;
              elem.add(option);
 9
10
         document.getElementById("student-selection-container").parentElement.classList.add('is-focused');
document.getElementById("student-selection-container").parentElement.classList.add('is-upgraded');
11
12
13 }
14
15⊖ function loadStudentInfo(id) {
         var request = new XMLHttpRequest();
16
17⊝
          request.onreadystatechange = function() {
18⊖
              if ((request.readyState == 4) && (request.status == 200)) {
                    var result = JSON.parse(request.responseText);
19
20
                   document.getElementById("firstNameDetails").value = result.firstName;
document.getElementById("lastNameDetails").value = result.lastName;
document.getElementById("grade-list").innerHTML = "";
21
22
23
24
25
                    document.getElementById("firstNameDetails").parentElement.classList.add('is-focused');
26
                    document.getElementById("firstNameDetails").parentElement.classList.add('is-upgraded');
27
                   document.getElementById("lastNameDetails").parentElement.classList.add('is-focused');
document.getElementById("lastNameDetails").parentElement.classList.add('is-upgraded');
28
29
30
31⊕
                    for(var i in result.grades) {
                         document.getElementById("grade-list").innerHTML += [
    "",
32⊖
33
                                    '<span class="mdl-list__item-primary-content">',
34
                                        '<i class="material-icons mdl-list__item-avatar">cast_for_education</i>',
'<span>',i, "-", result.grades[i],'</span>',
35
36
                                   "</span>",
37
                              ""].join(' ')
38
39
                    }
40
41
              }
42
          };
          request.open("GET", "api/studenti/"+id, true);
43
44
          request.send(null);
45 }
```

```
47⊖ function loadAllStudents() {
48
       var request = new XMLHttpRequest();
490
       request.onreadystatechange = function() {
50⊝
           if ((request readyState == 4) && (request status == 200)) {
51
               var result = JSON.parse(request.responseText);
               document.getElementById("all-students-list").innerHTML = "";
52
53
               students = result;
54
               loadSelect();
55⊝
               for(var i in result) {
56
                   var gradesum = 0;
57⊝
                   if(result[i].grades){
58
                       gradesum = Object.values(result[i].grades)
59
                       .reduce((val, acc)=>acc+val,0) / Object.values(result[i].grades).length;
60
61
62⊕
                   document.getElementById("all-students-list").innerHTML += [
                       "",
63
                           '<span class="mdl-list__item-primary-content">',
64
65
                               '<i class="material-icons mdl-list_item-avatar">person</i>',
                               '<span>',result[i].firstName, result[i].lastName,'</span>',
66
                               '<span class="mdl-list__item-text-body">',
67
                                   "Prosjek ocjena: ", gradesum,
68
                               '</span>',
69
                           "</span>",
70
                       ""].join(' ')
71
72
               }
73
           }
74
75
       request.open("GET", "api/studenti", true);
76
       request.send(null);
77 }
78
79⊖ function addStudent() {
80⊝
       var object = {
81
               lastName: document.forms["new-student-form"].elements.lastName.value,
82
               firstName: document.forms["new-student-form"].elements.firstName.value
83
84
       var request = new XMLHttpRequest();
85⊖
       request.onreadystatechange = function() {
86⊖
           if ((request.readyState == 4) && (request.status == 200)) {
87
                   loadAllStudents();
                   document.forms["new-student-form"].reset();
88
89
90
       };
       request.open("POST", "api/studenti", true);
91
       request.setRequestHeader("Content-Type", "application/json; charset=UTF-8");
92
       request.send(JSON.stringify(object));
93
94 }
95
96
97⊖ function init() {
98
       loadAllStudents();
99
```