

Skapa webbtjänster med Node.js och Express

Förenkla skapandet av webbtjänster

- Installera Node.js
- Installera Express-generator
 - Ett verktyg för att snabbt skapa ett "skelett" för din kod så att du kan påbörja din utveckling mycket snabbt.

<http://expressjs.com/starter/generator.html>

```
$ npm install express-generator -g
```

```
$ express -h
```

```
Usage: express [options] [dir]
```

```
Options:
```

```
  -h, --help            output usage information
  -V, --version          output the version number
  -e, --ejs              add ejs engine support (defaults to jade)
                        --hbs              add handlebars engine support
  -H, --hogan            add hogan.js engine support
  -c, --css <engine>    add stylesheet <engine> support (less|stylus|
compass|sass) (defaults to plain css)
                        --git              add .gitignore
  -f, --force            force on non-empty directory
```

```
$ express myapp
```

```
create : myapp  
create : myapp/package.json  
create : myapp/app.js  
create : myapp/public  
create : myapp/public/javascripts  
create : myapp/public/images  
create : myapp/routes  
create : myapp/routes/index.js  
create : myapp/routes/users.js  
create : myapp/public/stylesheets  
create : myapp/public/stylesheets/style.css  
create : myapp/views  
create : myapp/views/index.jade  
create : myapp/views/layout.jade  
create : myapp/views/error.jade  
create : myapp/bin  
create : myapp/bin/www
```

```
$ cd myapp  
$ npm install
```

MacOS or Linux

```
$ DEBUG=myapp npm start
```

Windows

```
> set DEBUG=myapp & npm start
```

```
.
├── app.js
├── bin
│   └── www
├── package.json
├── public
│   ├── images
│   ├── javascripts
│   └── stylesheets
│       └── style.css
├── routes
│   ├── index.js
│   └── users.js
└── views
    ├── error.jade
    ├── index.jade
    └── layout.jade
```

7 directories, 9 files

Routes → users.js (genererad)

```
var express = require('express');  
var router = express.Router();  
  
/* GET users listing. */  
router.get('/', function(req, res, next) {  
  res.send('respond with a resource');  
});  
  
module.exports = router;
```

Routes → users.js (modifierad)

```
var express = require('express');
var router = express.Router();

users = [];

users[0] = '{"_id":"0","name":"Mussi","goals":"6"}';
users[1] = '{"_id":"1","name":"Gnessi","goals":"8"}';
users[2] = '{"_id":"2","name":"Zoltan","goals":"9"}';
users[3] = '{"_id":"10","name":"Charlie Anka","goals":"35"}';

/*****
 * Get complete user listing
 *****/
router.get('/', function(req, res, next) {

  var out = "[";
  for(row of users){
    out += row.replace("'", "");
    out += ",";
  }
  out += "]";
  out = out.replace(",]", "]");

  console.log(out);
  var jsonObj = JSON.parse(out);
  res.contentType('application/json');
  res.send(jsonObj);
});
```


Routes → users.js

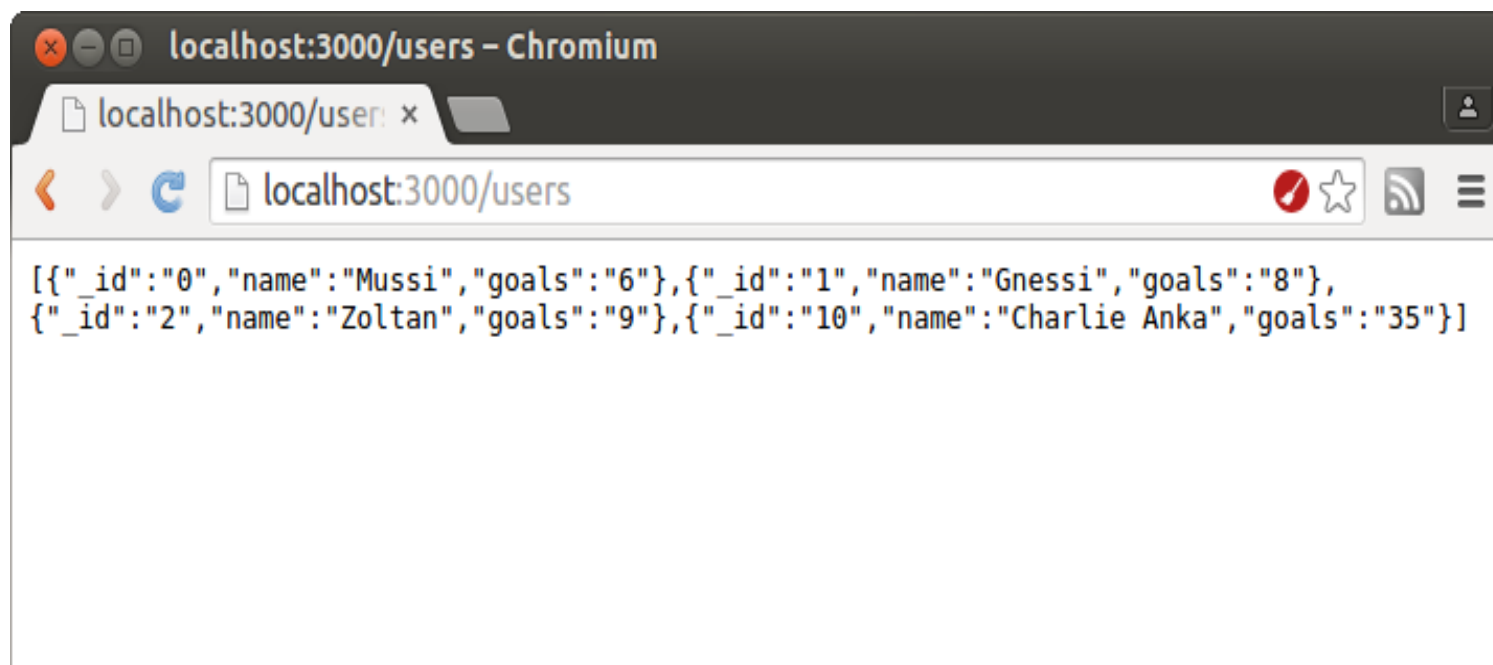
```
/******  
 * Get unique user id  
******/  
router.get('/:id', function(req, res, next) {  
  
    var id = req.params.id;  
    foundUser = "No user found!";  
  
    for(row of users){  
        rad=row.replace(/\s+/g, ""); // Trim away all the whitespaces in the string array  
        if(rad.indexOf("_id\":\""+id+"\",")>0) foundUser=row;  
    }  
    console.log(foundUser);  
    res.contentType('application/json');  
    res.send(foundUser);  
});
```

Routes → users.js

```
/******  
 * Delete unique user id  
*****/  
router.delete('/:id', function(req, res, next) {  
  var id = req.params.id;  
  var del=-1; cnt=0;  
  for(row of users){  
    rad=row.replace(/\s+/g, ""); // Trim away all the whitespaces in the string array  
    if(rad.indexOf("_id\":"'+id+'",')>0) del=cnt;  
    cnt++;  
  }  
  if(del>=0) status=users.splice(del, 1); // Delete element and fix array  
  console.log(id);  
  res.contentType('application/json');  
  res.send(id);  
});  
  
module.exports = router;
```

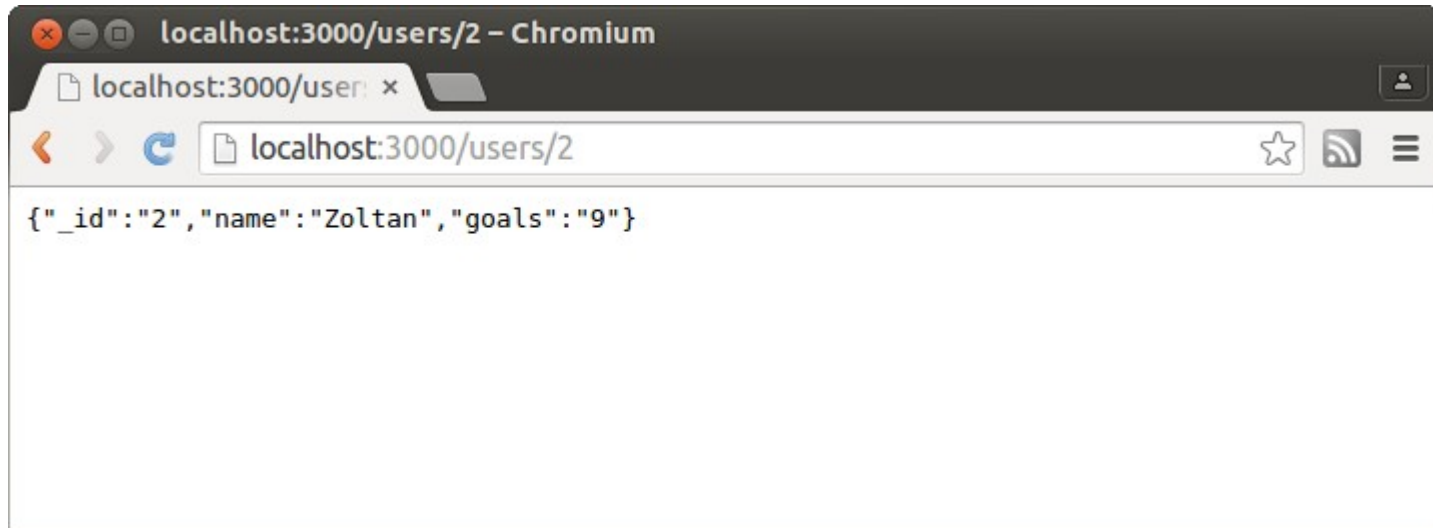
```
mikael@ZBook: ~/testapp2
Arkiv Redigera Visa Sök Terminal Hjälp
mikael@ZBook:~/testapp2$ DEBUG=testapp2.log npm start

> testapp2@0.0.0 start /home/mikael/testapp2
> node ./bin/www
```



A screenshot of a Chromium browser window. The title bar reads "localhost:3000/users - Chromium". The address bar shows "localhost:3000/users" with navigation icons on the left and a star, RSS, and menu icon on the right. The main content area displays a JSON array of four objects, each representing a football player with an ID, name, and goals.

```
[{"_id": "0", "name": "Mussi", "goals": "6"}, {"_id": "1", "name": "Gnessi", "goals": "8"}, {"_id": "2", "name": "Zoltan", "goals": "9"}, {"_id": "10", "name": "Charlie Anka", "goals": "35"}]
```



Advanced Rest Client Application - Chromium

Advanced Rest Client x

chrome-extension://hgmloofddfnphfcgellkdfbfbjeloo/RestClient.html

Search

Star

Print

Menu

Advanced Rest Client

[Unnamed]

Save

Open

Request

Socket

Projects

Saved

History

Settings

About

Rate this application

Donate

http://localhost:3000/users/1

GET

POST

PUT

PATCH

DELETE

HEAD

OPTIONS

Other

Raw

Form

Headers

Raw

Form

Files (0)

Payload

Encode payload

Decode payload

application/json

Set "Content-Type" header to overwrite this value.

Clear

Send

Status

200 OK

Loading time: 5 ms

Request headers

User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Ubuntu Chromium/45.0.2454.85 Chrome/45.0.2454.85 Safari/537.36

Origin: chrome-extension://hgmloofddfnphfcgellkdfbfbjeloo

Content-Type: application/json

Accept: */*

Accept-Encoding: gzip, deflate, sdch

Accept-Language: sv-SE,sv;q=0.8,en-US;q=0.6,en;q=0.4

Response headers

X-Powered-By: Express

Content-Type: application/json; charset=utf-8

Content-Length: 41

ETag: W/"29-vbKDXx5aUXpzhovA+ZEUEA"

Date: Thu, 24 Sep 2015 08:52:10 GMT

Connection: keep-alive

Raw

JSON

Response

Copy to clipboard

Save as file

```
{ "_id": 2, "name": "Zoltan", "goals": 9 }
```

Advanced Rest Client Application - Chromium

Advanced Rest Client x

chrome-extension://hgmloofddfnphfcgellkdfbfjelo/RestClient.html

[Unnamed]

Save Open

http://localhost:3000/users/1

GET

http://localhost:3000/users/1

GET POST PUT PATCH DELETE HEAD OPTIONS Other

Raw Form Headers

Clear Send

Status: 200 OK Loading time: 5 ms

Request headers

User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Ubuntu Chromium/45.0.2454.85 Chrome/45.0.2454.85 Safari/537.36
Origin: chrome-extension://hgmloofddfnphfcgellkdfbfjelo/
Content-Type: application/json
Accept: */*
Accept-Encoding: gzip, deflate, sdch
Accept-Language: sv-SE,sv;q=0.8,en-US;q=0.6,en;q=0.4

Response headers

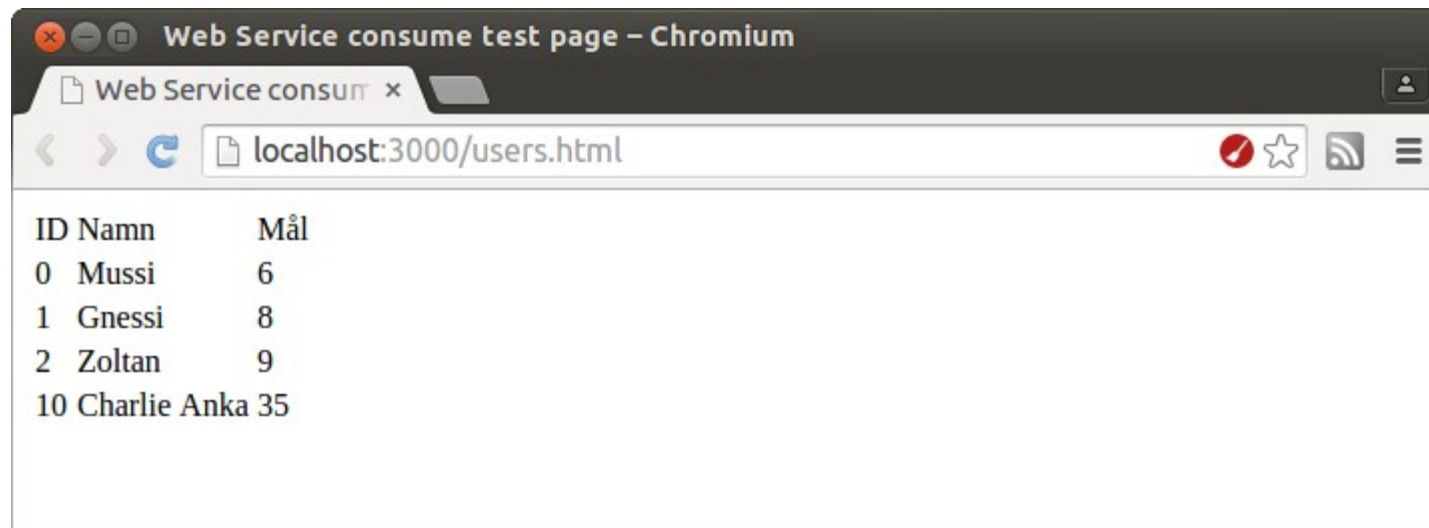
X-Powered-By: Express
Content-Type: application/json; charset=utf-8
Content-Length: 41
ETag: W/"29-vbKDX5aUXpzhovA+ZEUEA"
Date: Thu, 24 Sep 2015 08:52:10 GMT
Connection: keep-alive

Raw JSON Response

Copy to clipboard Save as file

```
{ "_id": 2, "name": "Zoltan", "goals": "9" }
```

Följande fil som konsumerar skapad webbtjänst /users har namnet users.html och ska placeras i katalogen public och kan sedan nås med webbläsaren på adress <http://localhost:3000/users.html>.




```
<!DOCTYPE html>
<html lang="sv">
<head>
  <meta charset="utf-8" />
  <title>Web Service consume test page</title>
  <script type="text/javascript" src="http://code.jquery.com/jquery-latest.min.js"></script>

  <style type="text/css">
  </style>

  <script type="text/javascript">

    $( document ).ready(function(){
      $.ajaxSetup({
        url: 'http://localhost:3000/users',
        type: 'GET',
        dataType: "json",
        success: function(data){
          out = "<table><tr><td>ID</td><td>Namn</td><td>Mål</td></tr>";
          for(i = 0; i < data.length; i++) {
            out += "<tr><td>" +
              data[i]._id + "</td><td>" +
              data[i].name + "</td><td>" +
              data[i].goals + "</td>";
          }
          out += "</table>";
          $('#result').html(out);
        }
      });
      $.ajax();
    });
  </script>
</head>
<body>
  <form method="post">
    <div id="result">
    </div>
  </form>
</body>
</html>
```