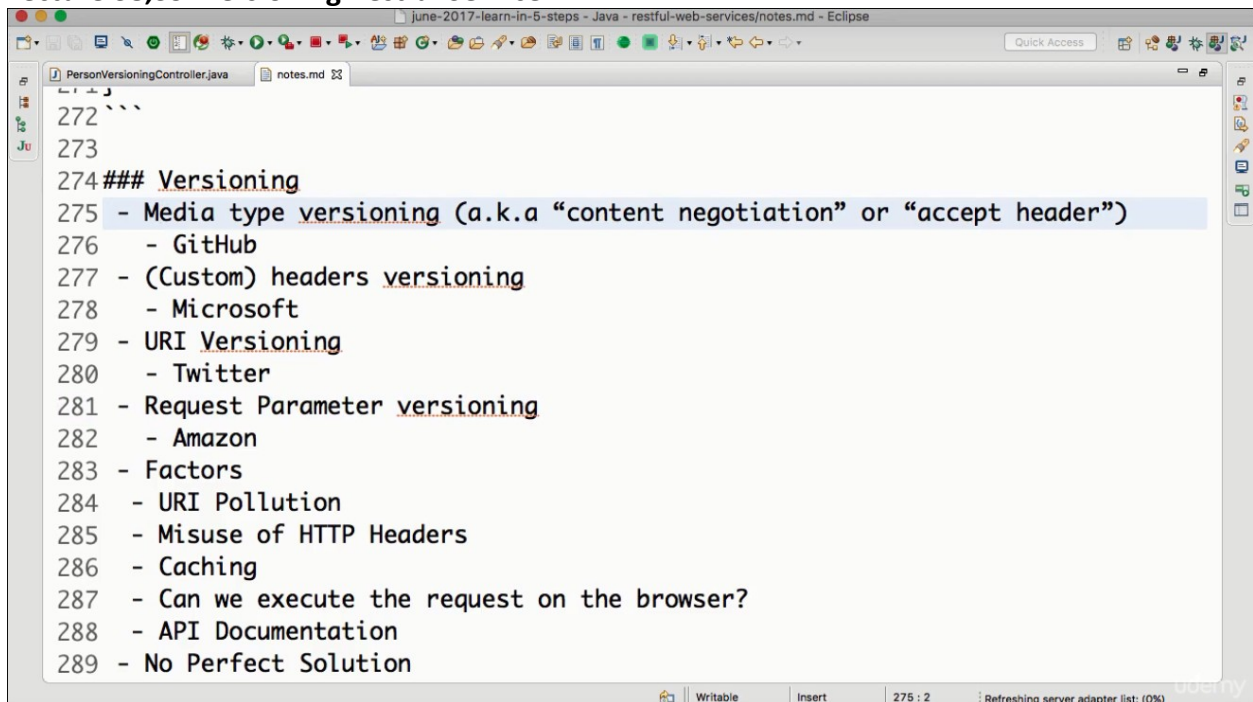


Lecture 38,39: Versioning Restful Service:



```
272 ```
273
274 ### Versioning
275 - Media type versioning (a.k.a "content negotiation" or "accept header")
276 - GitHub
277 - (Custom) headers versioning
278 - Microsoft
279 - URI Versioning
280 - Twitter
281 - Request Parameter versioning
282 - Amazon
283 - Factors
284 - URI Pollution
285 - Misuse of HTTP Headers
286 - Caching
287 - Can we execute the request on the browser?
288 - API Documentation
289 - No Perfect Solution
```

→ URI Versioning

→ Header Versioning

→ Request Param versioning

→ MIME type versioning

1 & 2 → pollutes URIs (many URIs for the same functionality)

3 & 4 → pollutes Headers (Many headers that are not intended for versioning are used).Caching becomes difficult here.

Disadv:

URI pollution → happens in 1

Header Pollution → happens 2

Caching → not easy in 3,4

Ease of executing request on browser → not easy in 3,4

Ease of generating documentation → easy in 1 & 2

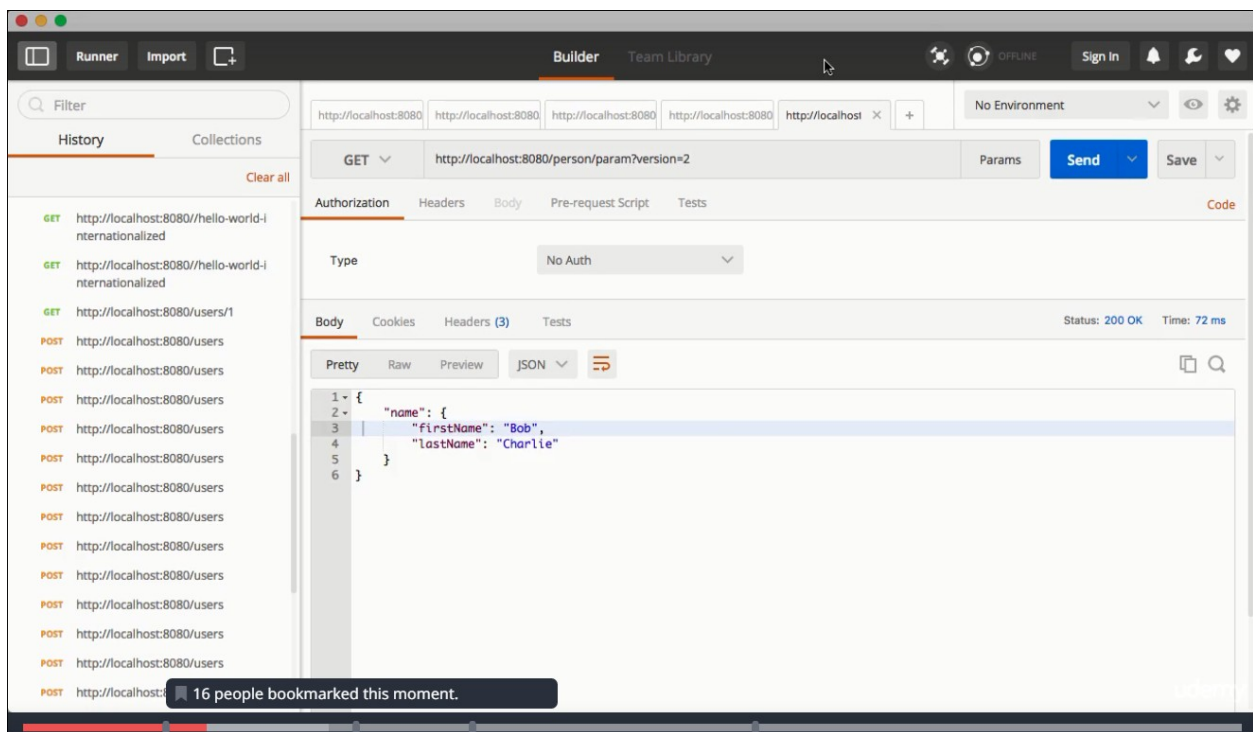
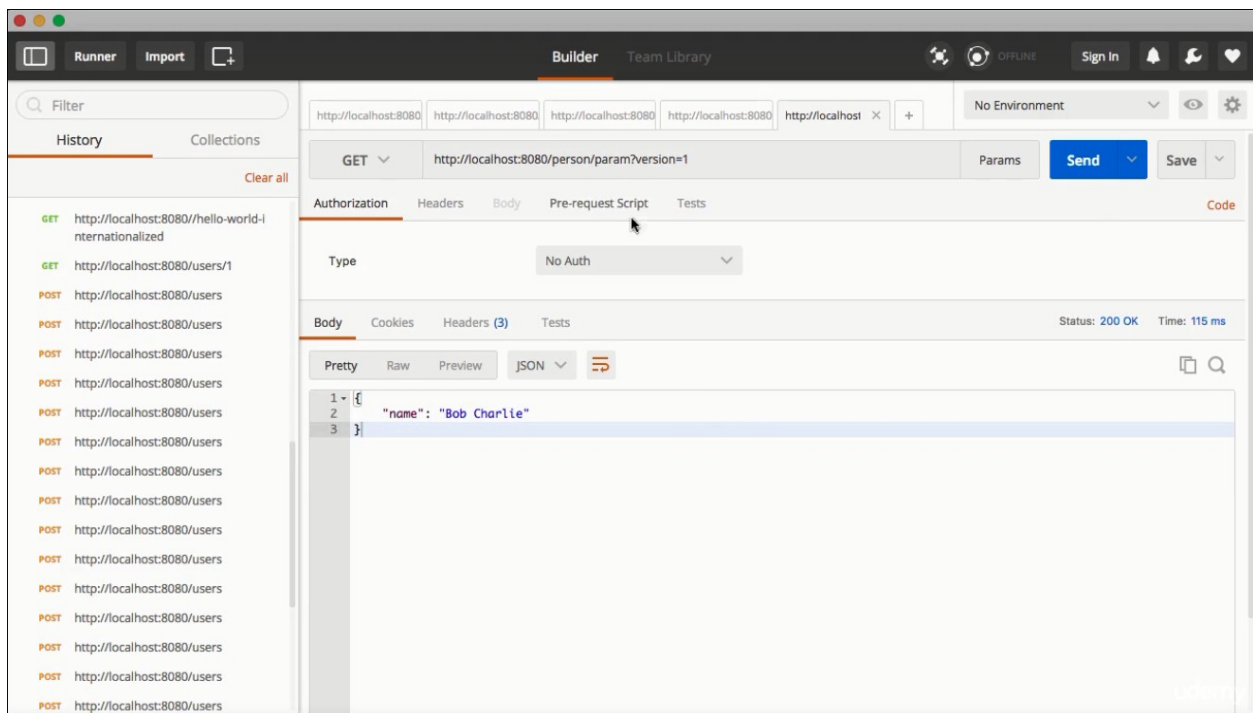
**** before coding , finalize your versioning strategy**

URI-Approach1: (URI versioning)

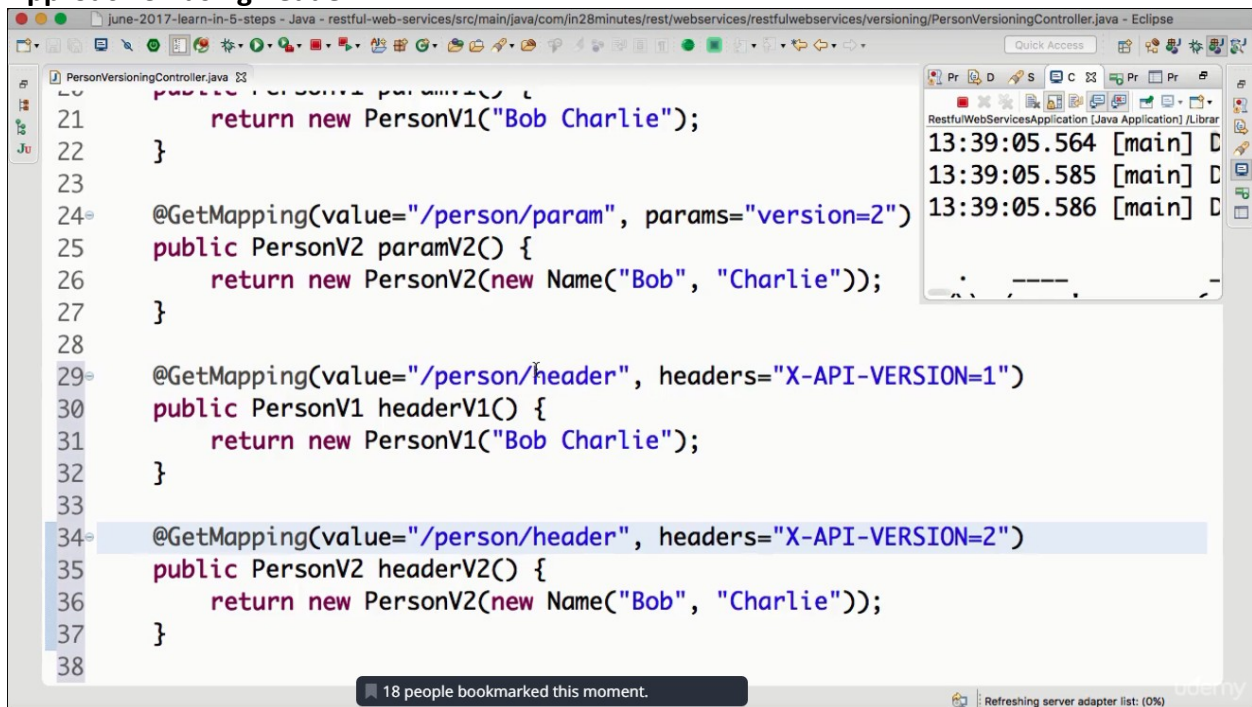
```
PersonVersioningController.java
3 import org.springframework.web.bind.annotation.GetMapping;
4 import org.springframework.web.bind.annotation.RestController;
5
6 @RestController
7 public class PersonVersioningController {
8
9     @GetMapping("v1/person")
10    public PersonV1 personV1() {
11        return new PersonV1("Bob Charlie");
12    }
13
14    @GetMapping("v2/person")
15    public PersonV2 personV2() {
16        return new PersonV2(new Name("Bob", "Charlie"));
17    }
18
19 }
20
```

URI-Approach2: (request params versioning)

```
PersonVersioningController.java
13
14    @GetMapping("v2/person")
15    public PersonV2 personV2() {
16        return new PersonV2(new Name("Bob", "Charlie"));
17    }
18
19    @GetMapping(value="/person/param", params="version=1")
20    public PersonV1 paramV1() {
21        return new PersonV1("Bob Charlie");
22    }
23
24    @GetMapping(value="/person/param", params="version=2")
25    public PersonV2 paramV2() {
26        return new PersonV2(new Name("Bob", "Charlie"));
27    }
28
29 }
30
```

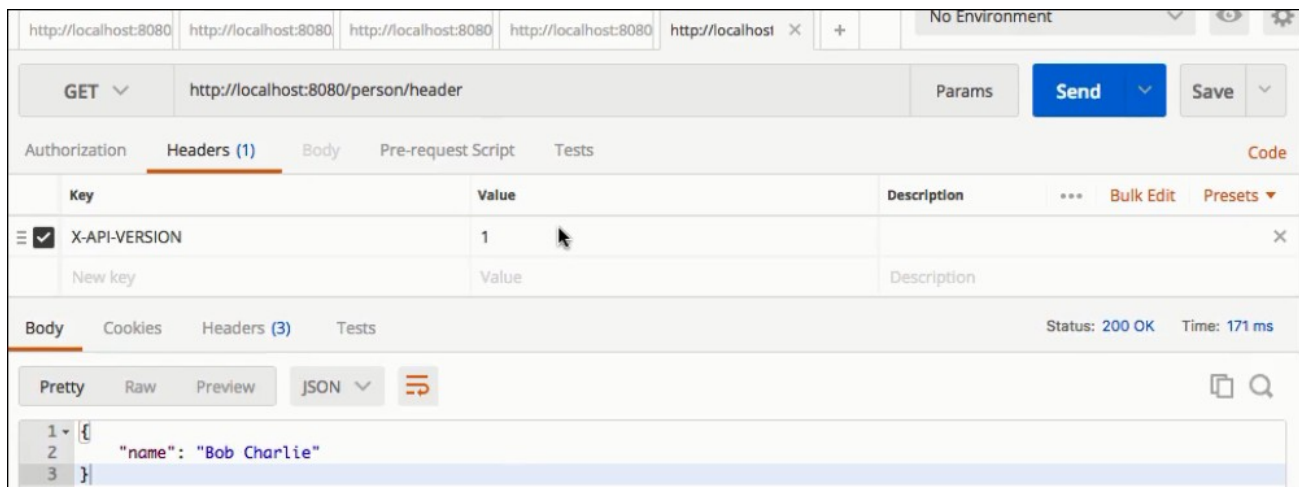


Approach 3 : using header



```
21     return new PersonV1("Bob Charlie");
22 }
23
24 @GetMapping(value="/person/param", params="version=2")
25 public PersonV2 paramV2() {
26     return new PersonV2(new Name("Bob", "Charlie"));
27 }
28
29 @GetMapping(value="/person/header", headers="X-API-VERSION=1")
30 public PersonV1 headerV1() {
31     return new PersonV1("Bob Charlie");
32 }
33
34 @GetMapping(value="/person/header", headers="X-API-VERSION=2")
35 public PersonV2 headerV2() {
36     return new PersonV2(new Name("Bob", "Charlie"));
37 }
38
```

18 people bookmarked this moment.



http://localhost:8080 | http://localhost:8080 | http://localhost:8080 | http://localhost:8080 | http://localhost:8080

GET | http://localhost:8080/person/header | Params | Send | Save

Authorization | Headers (1) | Body | Pre-request Script | Tests | Code

Key	Value	Description
X-API-VERSION	1	
New key	Value	Description

Body | Cookies | Headers (3) | Tests | Status: 200 OK | Time: 171 ms

Pretty | Raw | Preview | JSON |

```
1 {
2   "name": "Bob Charlie"
3 }
```


http://localhost:8080 http://localhost:8080 http://localhost:8080 http://localhost:8080 http://localhost:8080 x + No Environment

GET http://localhost:8080/person/header Params Send Save

Authorization Headers (1) Body Pre-request Script Tests Code

Key	Value	Description
<input checked="" type="checkbox"/> X-API-VERSION	2	
New key	Value	Description

Body Cookies Headers (3) Tests Status: 200 OK Time: 41 ms

Pretty Raw Preview JSON

```
1 {
2   "name": {
3     "firstName": "Bob",
4     "lastName": "Charlie"
5   }
6 }
```

Approach4: (MIME type versioning) using return type(produces)

```
1 2017-learn-in-5-steps - Java - restful-web-services/src/main/java/com/in28minutes/rest/web/services/versioning/PersonVersioningController.java - Eclipse
2
3
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16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31 rn new PersonV1("Bob Charlie");
32
33
34=ing(value="/person/header", headers="X-API-VERSION=2")
35 ersonV2 headerV2() {
36 rn new PersonV2(new Name("Bob", "Charlie"));
37
38
39=ing(value="/person/produces", produces = "application/vnd.company.app-v1+json")
40 ersonV1 producesV1() {
41 rn new PersonV1("Bob Charlie");
42
43
44=ing(value="/person/produces", produces = "application/vnd.company.app-v2+json")
45 ersonV2 producesV2() {
46 rn new PersonV2(new Name("Bob", "Charlie"));
47
48
```

http://localhost:8080 http://localhost:8080 http://localhost:8080 http://localhost:8080 http://localhost:8080 x + No Environment

GET http://localhost:8080/person/produces Params Send Save

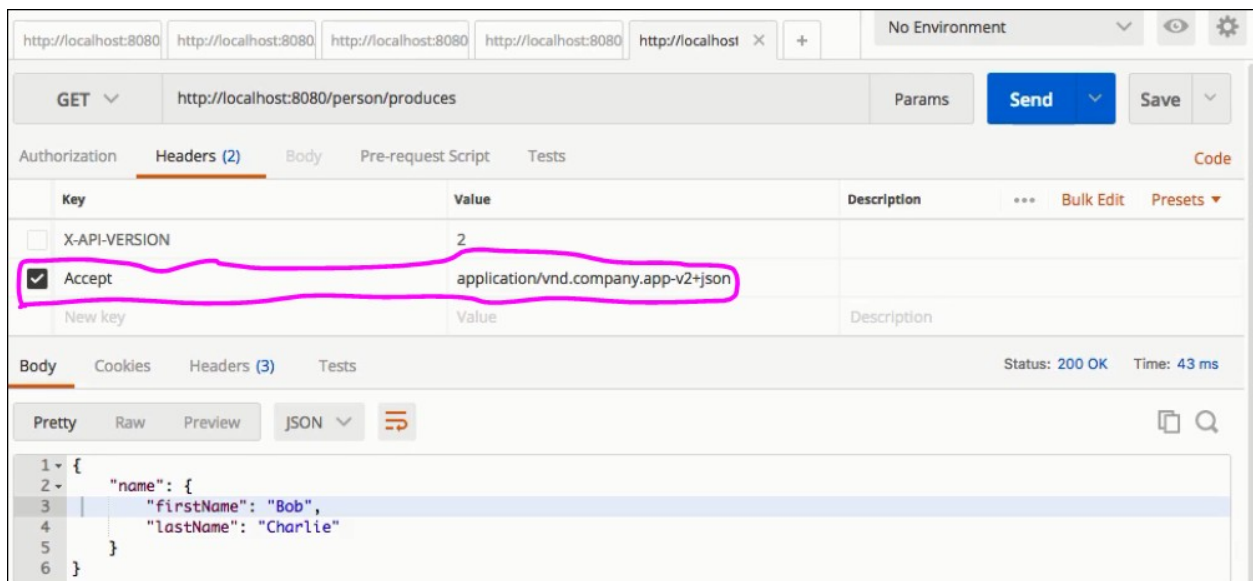
Authorization Headers (2) Body Pre-request Script Tests Code

Key	Value	Description
<input type="checkbox"/> X-API-VERSION	2	
<input checked="" type="checkbox"/> Accept	application/vnd.company.app-v1+json	
New key	Value	Description

Body Cookies Headers (3) Tests Status: 200 OK Time: 98 ms

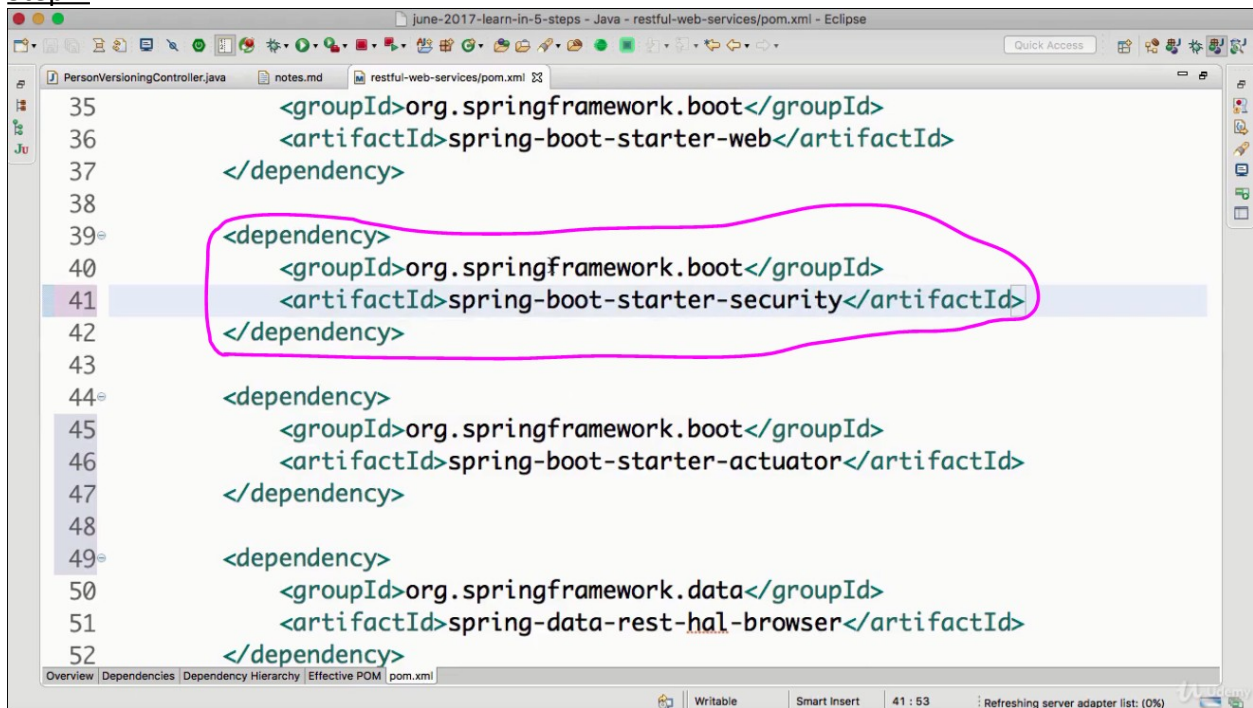
Pretty Raw Preview JSON

```
1 {
2   "name": "Bob Charlie"
3 }
```

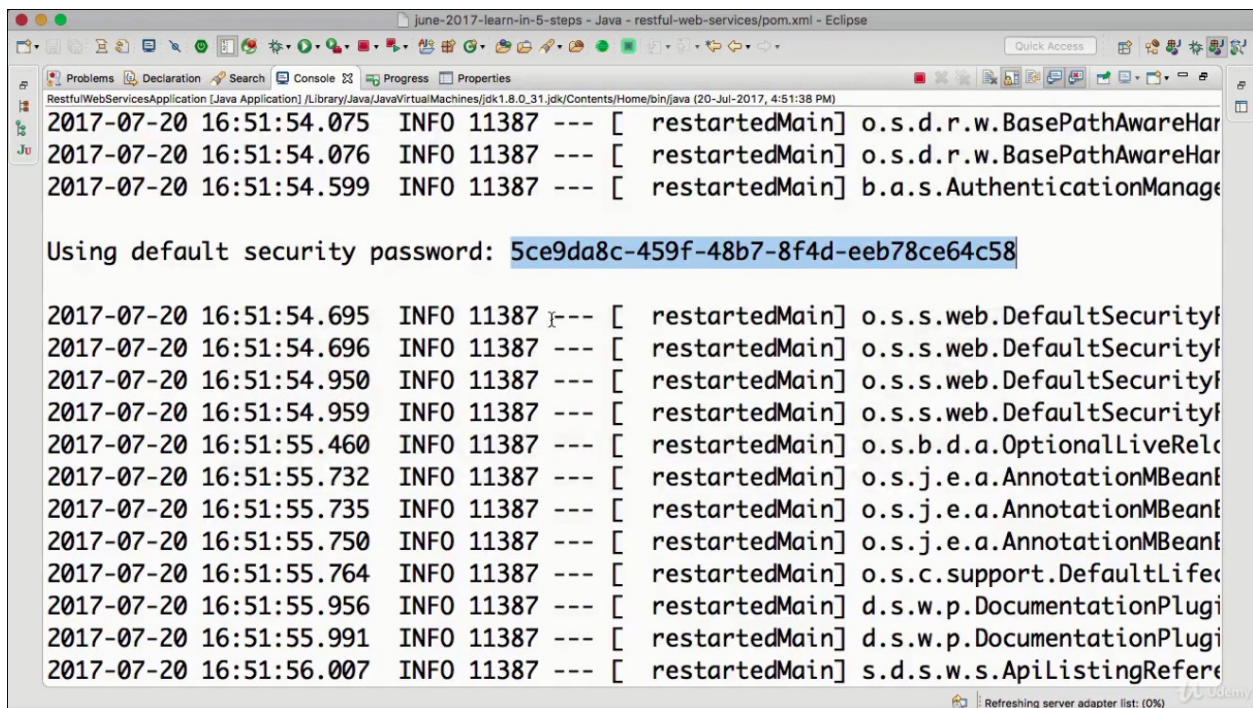


Lecture 40: Basic Authentication

Step1:



Step2: Restart the server . U will notice the default password in the log.copy it.



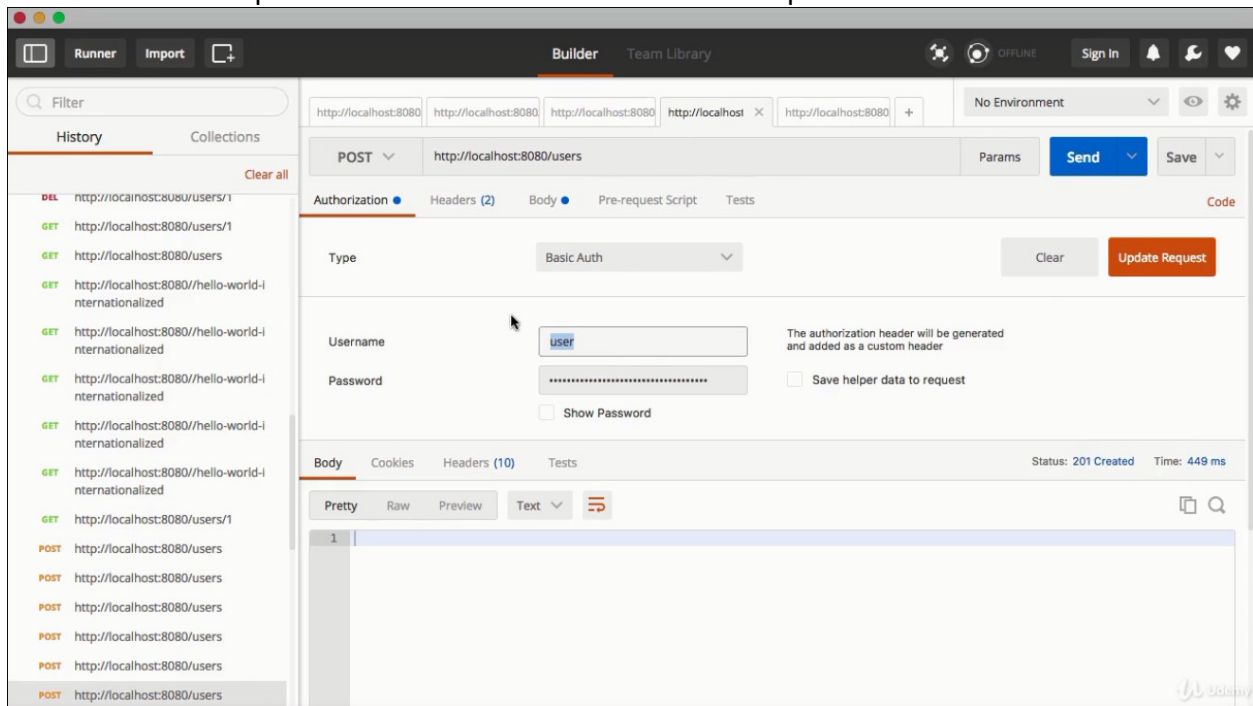
The screenshot shows the Eclipse IDE's console window. The title bar indicates the file is 'june-2017-learn-in-5-steps - Java - restful-web-services/pom.xml - Eclipse'. The console displays a series of log messages from a Java application named 'RestfulWebServicesApplication'. The messages are INFO level, timestamped '2017-07-20 16:51:54.075', '2017-07-20 16:51:54.076', and '2017-07-20 16:51:54.599'. They show the application starting and initializing various components like 'o.s.d.r.w.BasePathAwareHar', 'o.s.d.r.w.BasePathAwareHar', 'b.a.s.AuthenticationManage', 'o.s.s.web.DefaultSecurityf', 'o.s.b.d.a.OptionalLiveRelc', 'o.s.j.e.a.AnnotationMBeanf', 'o.s.c.support.DefaultLifec', 'd.s.w.p.DocumentationPlugi', and 's.d.s.w.s.ApiListingRefer'. A specific line shows the default security password: 'Using default security password: 5ce9da8c-459f-48b7-8f4d-eeb78ce64c58'. The console also shows a status bar at the bottom indicating 'Refreshing server adapter list: (0%)'.

```
2017-07-20 16:51:54.075 INFO 11387 --- [ restartedMain] o.s.d.r.w.BasePathAwareHar
2017-07-20 16:51:54.076 INFO 11387 --- [ restartedMain] o.s.d.r.w.BasePathAwareHar
2017-07-20 16:51:54.599 INFO 11387 --- [ restartedMain] b.a.s.AuthenticationManage

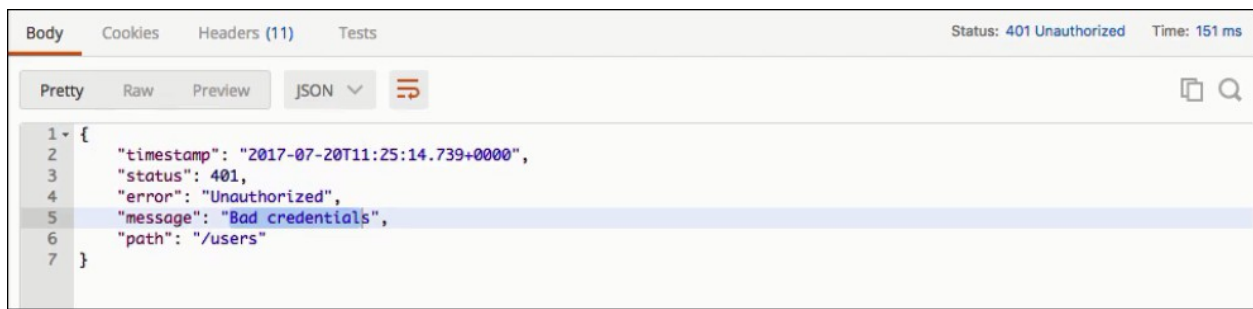
Using default security password: 5ce9da8c-459f-48b7-8f4d-eeb78ce64c58

2017-07-20 16:51:54.695 INFO 11387 --- [ restartedMain] o.s.s.web.DefaultSecurityf
2017-07-20 16:51:54.696 INFO 11387 --- [ restartedMain] o.s.s.web.DefaultSecurityf
2017-07-20 16:51:54.950 INFO 11387 --- [ restartedMain] o.s.s.web.DefaultSecurityf
2017-07-20 16:51:54.959 INFO 11387 --- [ restartedMain] o.s.s.web.DefaultSecurityf
2017-07-20 16:51:55.460 INFO 11387 --- [ restartedMain] o.s.b.d.a.OptionalLiveRelc
2017-07-20 16:51:55.732 INFO 11387 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanf
2017-07-20 16:51:55.735 INFO 11387 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanf
2017-07-20 16:51:55.750 INFO 11387 --- [ restartedMain] o.s.j.e.a.AnnotationMBeanf
2017-07-20 16:51:55.764 INFO 11387 --- [ restartedMain] o.s.c.support.DefaultLifec
2017-07-20 16:51:55.956 INFO 11387 --- [ restartedMain] d.s.w.p.DocumentationPlugi
2017-07-20 16:51:55.991 INFO 11387 --- [ restartedMain] d.s.w.p.DocumentationPlugi
2017-07-20 16:51:56.007 INFO 11387 --- [ restartedMain] s.d.s.w.s.ApiListingRefer
```

Now use the same password & default user “user” in the request to access all the resources.

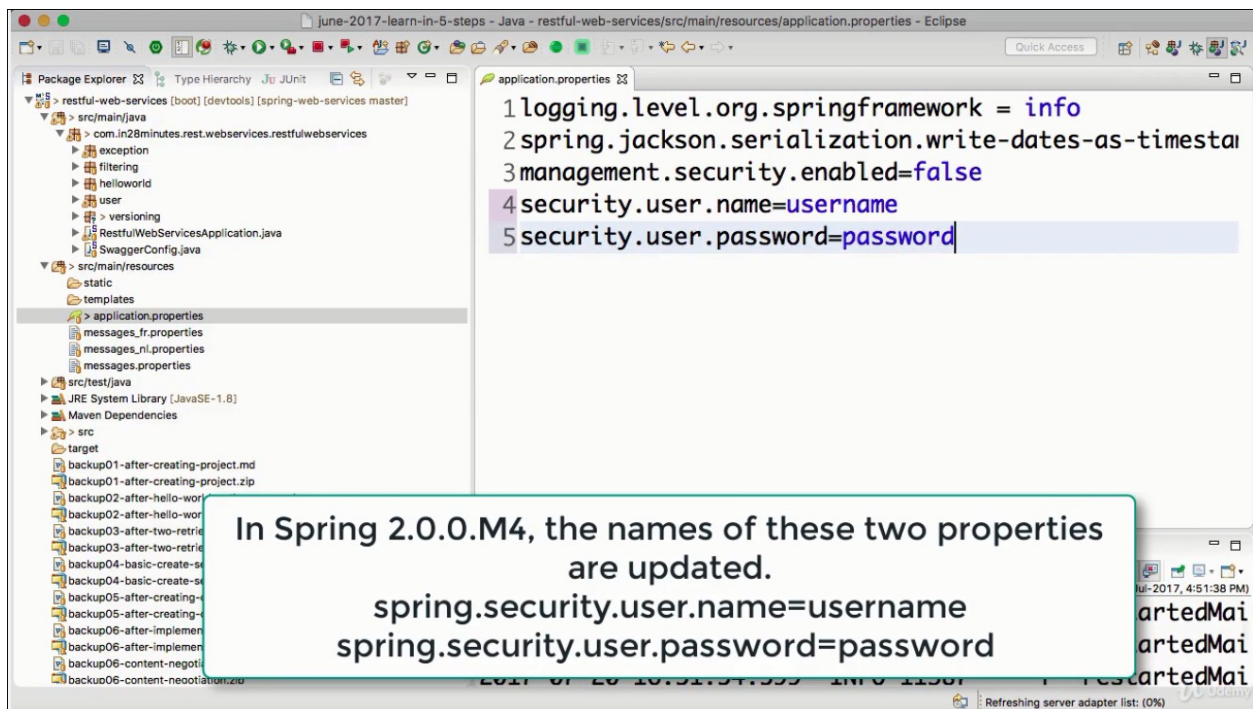


If username/password is not correct or provided :



Disadvantage: each time server restarts , the password changes.

Solution : provide the password in the application.properties



try now with new username/password .It'll provide u the expected result.