

```
1 package stanford.guided_lab_309_5;
2
3 import org.springframework.boot.SpringApplication;
4 import org.springframework.boot.autoconfigure.
  SpringApplication;
5
6 @SpringBootApplication
7 public class Application {
8
9     public static void main(String[] args) {
10         SpringApplication.run(Application.class, args
11     );
12     }
13 }
14
```

```
1 package stanford.guided_lab_309_5.model;
2
3 import lombok.AccessLevel;
4 import lombok.Data;
5 import lombok.NoArgsConstructor;
6 import lombok.experimental.FieldDefaults;
7
8 @NoArgsConstructor
9 @FieldDefaults(level = AccessLevel.PRIVATE)
10 public class User {
11     int id;
12     String name;
13     String email;
14
15     public User(int id, String name, String email) {
16         this.id = id;
17         this.name = name;
18         this.email = email;
19     }
20
21     public User(int id, String name) {
22         this.id = id;
23         this.name = name;
24     }
25     public int getId() {
26         return id;
27     }
28     public void setId(int id) {
29         this.id = id;
30     }
31
32     public String getName() {
33         return name;
34     }
35
36     public void setName(String name) {
37         this.name = name;
38     }
39     public String getEmail() {
40         return email;
41     }
```

```
42     public void setEmail(String email) {
43         this.email = email;
44     }
45     @Override
46     public String toString() {
47         return "User{" +
48             "id=" + id +
49             ", name='" + name + '\'' +
50             ", email='" + email + '\'' +
51             '}';
52     }
53 }
54
55
```

```
1 package stanford.guided_lab_309_5.controller;
2
3 import org.springframework.stereotype.Controller;
4 import org.springframework.ui.Model;
5 import org.springframework.web.bind.annotation.*;
6 import stanford.guided_lab_309_5.model.User;
7
8 import java.util.ArrayList;
9 import java.util.List;
10
11 @Controller
12 public class UserController {
13
14     /*This method demonstrates the use @
15    ModelAttribute annotation at the method level.
16     * This method creates a list and returns a list
17     of countries
18     * @return list of countries
19     */
20     @ModelAttribute("countries")
21     public List < String > getUserCountries() {
22         List < String > countries = new ArrayList
23         < > ();
24         countries.add("UK");
25         countries.add("USA");
26         countries.add("Japan");
27         return countries;
28     }
29
30     /* This method is the variation of the above
31     method.
32     * It will accept a model and save values in this
33     model.
34     * These saved values will be available on the
35     frontend */
36
37     @ModelAttribute
38     public void getUsers (Model model)
39     {
40         User u1 = new User(1,"Harry","harry@gmail.com
41         ");
```

```

35         User u2 = new User(2,"William","Wilbur@gmail.
        com");
36         User u3 = new User(3,"Fred","Fred@gmail.com"
        );
37         List < User> myuser = new ArrayList < > ();
38         myuser.add(u1);
39         myuser.add(u2);
40         myuser.add(u3);
41         model.addAttribute("myuserAttribute", myuser
        );
42     }
43
44
45     /* A handler method can have more than one
        parameters with @ModelAttribute
46     * The following handler method will retrieve the
        'countries'
47     * * *attribute from the model
48     */
49     @GetMapping("/Home")
50     public String home(@ModelAttribute("countries")
        List < String > countries,Model model) {
51
52         //Adding more countries
53         countries.add("Australia");
54         countries.add("Canada");
55         return "Home";
56     }
57 }
58

```

```
1 package stanford.guided_lab_309_5.controller;
2
3 import org.springframework.stereotype.Controller;
4 import org.springframework.ui.Model;
5 import org.springframework.web.bind.annotation.
    GetMapping;
6 import org.springframework.web.bind.annotation.
    ModelAttribute;
7 import org.springframework.web.servlet.ModelAndView;
8 import stanford.guided_lab_309_5.model.User;
9
10 import java.util.ArrayList;
11 import java.util.Arrays;
12 import java.util.List;
13
14 @Controller
15 public class ModelAndViewcontroller {
16     @GetMapping("/showViewPage")
17     public String passParametersWithModel(Model model
18 ) {
19         model.addAttribute("message", "Perscholas");
20         model.addAttribute("welcomeMessage", "welcome
21 ");
22         int i = 10;
23         model.addAttribute("number", i);
24
25         List<String> list = Arrays.asList("one", "two
26 ");
27         model.addAttribute("listData", list);
28         return "viewPage";
29     }
30
31     @GetMapping("/goToViewPage")
32     public ModelAndView
33     passParametersWithModelAndView() {
34         String st = "Welcome to the Page";
35         ModelAndView modelAndView = new ModelAndView(
36 "viewPage_2");
37         modelAndView.addObject("message", st);
38         modelAndView.addObject("info", "Employee
```

```
34 information.");
35     return modelAndView;
36 }
37 @GetMapping("/goToUserViewPage")
38 public ModelAndView UserModelAndView() {
39     List<User> listUsers = new ArrayList<>();
40     listUsers.add(new User(1,"Haseeb","haseeb@abc
.com,"));
41     listUsers.add(new User(2,"Shahparan","
Shahparan@abc.com,"));
42     listUsers.add(new User(3,"James","James@abc.
com,"));
43     listUsers.add(new User(4,"Joseph","Joseph@abc
.com,"));
44
45     ModelAndView modelAndView = new ModelAndView(
"userdata");
46     modelAndView.addObject("userlist", listUsers
);
47     return modelAndView;
48 }
49
50 }
```

1
2


```
1 <!DOCTYPE HTML>
2 <html lang="en" xmlns:th="http://www.thymeleaf.org">
3 <head>
4     <meta charset="UTF-8">
5     <title>Title</title>
6 </head>
7 <body>
8 <h4>Country List</h4>
9 <tr th:each="country: ${countries}">
10     <td th:text="${country}" />
11     <td><br/></td>
12 </tr>
13 <h4>User List</h4>
14 <tr th:each="myuser: ${myuserAttribute}">
15     <td th:text="${myuser.id}" />
16     <td th:text="${myuser.name}" />
17     <td th:text="${myuser.email}" />
18     <td><br/></td>
19 </tr>
20 </body>
21 </html>
```

```
1
2 <!DOCTYPE HTML>
3 <html lang="en" xmlns:th="http://www.thymeleaf.org">
4 <head>
5     <meta charset="UTF-8">
6     <title>Title</title>
7 </head>
8 <body>
9 <table>
10     <thead>
11     <th>id</th>
12     <th>name</th>
13     <th>email</th>
14     </thead>
15     <tr th:each="list: ${userlist}">
16         <td th:text="${list.id}"></td>
17         <td th:text="${list.name}"></td>
18         <td th:text="${list.email}"></td>
19     </tr>
20 </table>
21 </body>
22 </html>
23
24
```

```
1
2 <!DOCTYPE HTML>
3 <html lang="en" xmlns:th="http://www.thymeleaf.org">
4 <head>
5     <meta charset="UTF-8">
6     <title>Title</title>
7 </head>
8 <body>
9 <h2 th:text="${welcomeMessage}" ></h2>
10 <h3 th:text="${number}" ></h3>
11 <h3 th:text="${listData}" ></h3>
12 <div th:text="${message}"> </div>
13 </body>
14 </html>
15
16
```

```
1 <!DOCTYPE HTML>
2 <!--<html lang="en">-->
3 <html lang="en" xmlns:th="http://www.thymeleaf.org">
4 <head>
5     <meta charset="UTF-8">
6     <title>Title</title>
7 </head>
8 <body>
9 <h4 th:text="${info}" ></h4>
10 <div th:text="${message}"> </div>
11 </body>
12 </html>
```

```
1 package stanford.guided_lab_309_5;
2
3 import org.junit.jupiter.api.Test;
4 import org.springframework.boot.test.context.
  SpringBootTest;
5
6 @SpringBootTest
7 class ApplicationTests {
8
9     @Test
10     void contextLoads() {
11     }
12
13 }
14
```