

UserController.java

```
1  package nl.tudelft.sem.group21b.user.controllers;
2
3  import java.util.List;
4  import nl.tudelft.sem.group21b.user.entities.Notification;
5  import nl.tudelft.sem.group21b.user.entities.User;
6  import nl.tudelft.sem.group21b.user.repositories.NotificationRepository;
7  import nl.tudelft.sem.group21b.user.repositories.UserRepository;
8  import org.springframework.beans.factory.annotation.Autowired;
9  import org.springframework.web.bind.annotation.*;
10
11  @RestController
12  @RequestMapping("/user")
13  public class UserController {
14
15      @Autowired
16      private transient UserRepository userRepository;
17
18      /**
19       * Gets User by id.
20       *
21       * @param id the id of the user
22       * @return the user
23       */
24      @GetMapping("/getUser")
25      @ResponseBody
26      public User getUserById(@RequestParam long id) {
27  2      if (id <= 0) {
28          return null;
29      }
30
31      User user = userRepository.findById(id).orElse(null);
32
33  2      if (user == null || user.getClass() != User.class) {
34          return null;
35      }
36
37  1      return user;
38  }
39
40      /**
41       * Add User.
42       *
43       * @param name name of new user
44       * @param email email of new user
45       * @param password password of new user
46       * @return added user
47       */
48      @PostMapping("/addUser")
49      public User addUser(@RequestParam String name, @RequestParam String email, @RequestParam String password) {
50          List<User> users = userRepository.findByEmail(email);
51  2      if (users.size() > 0) {
52          return null;
53      }
54      User user = new User(name, email, password);
55  1      return userRepository.save(user);
56
57  }
58
59      /**
60       * Update User Info.
61       *
62       * @param id id of user to change
63       * @param name new name of new user
64       * @param email new email of new user
65       * @param password new password of new user
66       * @return changed user
67       */
68      @PostMapping("/updateUser")
69      public User updateUser(
70          @RequestParam Long id,
71          @RequestParam String name,
72          @RequestParam String email,
```

```

73     @RequestParam String password) {
74     User user = getUserById(id);
75     if (user == null) {
76         return null;
77     }
78
79     if (email.equals(user.getEmail())) {
80
81         user.setName(name);
82         user.setPassword(password);
83     } else {
84         List<User> users = userRepository.findByEmail(email);
85         if (users.size() > 0) {
86             return null;
87         } else {
88             user.setName(name);
89             user.setPassword(password);
90             user.setEmail(email);
91         }
92     }
93 }
94 return userRepository.save(user);
95 }
96 }

```

Mutations

- [27](#) 1. changed conditional boundary → SURVIVED
2. negated conditional → KILLED
- [33](#) 1. negated conditional → KILLED
2. negated conditional → KILLED
- [37](#) 1. replaced return value with null for nl/tudelft/sem/group21b/user/controllers/UserController::getUserById → KILLED
- [51](#) 1. changed conditional boundary → KILLED
2. negated conditional → KILLED
- [55](#) 1. replaced return value with null for nl/tudelft/sem/group21b/user/controllers/UserController::addUser → KILLED
- [75](#) 1. negated conditional → KILLED
- [79](#) 1. negated conditional → SURVIVED
- [81](#) 1. removed call to nl/tudelft/sem/group21b/user/entities/User::setName → SURVIVED
- [82](#) 1. removed call to nl/tudelft/sem/group21b/user/entities/User::setPassword → SURVIVED
- [85](#) 1. changed conditional boundary → SURVIVED
2. negated conditional → SURVIVED
- [88](#) 1. removed call to nl/tudelft/sem/group21b/user/entities/User::setName → NO_COVERAGE
- [89](#) 1. removed call to nl/tudelft/sem/group21b/user/entities/User::setPassword → NO_COVERAGE
- [90](#) 1. removed call to nl/tudelft/sem/group21b/user/entities/User::setEmail → NO_COVERAGE
- [94](#) 1. replaced return value with null for nl/tudelft/sem/group21b/user/controllers/UserController::updateUser → KILLED

Active mutators

- BOOLEAN_FALSE_RETURN
- BOOLEAN_TRUE_RETURN
- CONDITIONALS_BOUNDARY_MUTATOR
- EMPTY_RETURN_VALUES
- INCREMENTS_MUTATOR
- INVERT_NEGS_MUTATOR
- MATH_MUTATOR
- NEGATE_CONDITIONALS_MUTATOR
- NULL_RETURN_VALUES
- PRIMITIVE_RETURN_VALS_MUTATOR
- VOID_METHOD_CALL_MUTATOR

Tests examined

- nl.tudelft.sem.group21b.user.controllers.UserControllerTest.[engine:junit-jupiter]/[class:nl.tudelft.sem.group21b.user.controllers.UserControllerTest]/[method:updateUserTestUserValid()] (31 ms)
- nl.tudelft.sem.group21b.user.controllers.UserControllerTest.[engine:junit-jupiter]/[class:nl.tudelft.sem.group21b.user.controllers.UserControllerTest]/[method:addUserTestEmailAlreadyUsed()] (31 ms)
- nl.tudelft.sem.group21b.user.controllers.UserControllerTest.[engine:junit-jupiter]/[class:nl.tudelft.sem.group21b.user.controllers.UserControllerTest]/[method:addUserTestValid()] (26 ms)
- nl.tudelft.sem.group21b.user.controllers.UserControllerTest.[engine:junit-jupiter]/[class:nl.tudelft.sem.group21b.user.controllers.UserControllerTest]/[method:getUserByIdExists()] (31 ms)
- nl.tudelft.sem.group21b.user.controllers.UserControllerTest.[engine:junit-jupiter]/[class:nl.tudelft.sem.group21b.user.controllers.UserControllerTest]/[method:updateUserTestUserInvalidNewEmail()] (31 ms)
- nl.tudelft.sem.group21b.user.controllers.UserControllerTest.[engine:junit-jupiter]/[class:nl.tudelft.sem.group21b.user.controllers.UserControllerTest]/[method:getUserByIdNotPresent()] (32 ms)
- nl.tudelft.sem.group21b.user.controllers.UserControllerTest.[engine:junit-jupiter]/[class:nl.tudelft.sem.group21b.user.controllers.UserControllerTest]/[method:updateUserTestUserValidNewEmail()] (37 ms)
- nl.tudelft.sem.group21b.user.controllers.UserControllerTest.[engine:junit-jupiter]/[class:nl.tudelft.sem.group21b.user.controllers.UserControllerTest]/[method:getUserByIdInvalid()] (15 ms)
- nl.tudelft.sem.group21b.controllerhelpers.APICallHelperTest.[engine:junit-jupiter]/[class:nl.tudelft.sem.group21b.controllerhelpers.APICallHelperTest]/[method:deleteTest()] (4137 ms)

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