



## **Report**

**Course: CSE434**

Section:1

**Project Name: Label Hub Automation and Testing**

Submitted by

**Faisal Mahmud 2011523642**

**Submitted to**

**Dr. Nabeel Mohammed**

Department of Electrical and Computer Engineering

**North South University**

**Dhaka, Bangladesh**

Here is an step by step guide to run tests using selenium.

## Setup Steps:

1. Download and Install Eclipse from <https://www.eclipse.org/downloads/>
2. To install Selenium,
  - a. Go to the website of selenium from: <https://www.selenium.dev/downloads/>
  - b. Scroll down and look for previous releases

### Previous Releases

Here you can find a more complete list of Selenium [releases](#).

#### C. Select version 3.141.59

### Previous Releases

● Selenium 3.141.59

Release date: [November 14, 2018](#) [🔗](#)

Name	Size
<a href="#">IEDriverServer_Win32_3.141.59.zip</a>	1.0 MB
<a href="#">IEDriverServer_x64_3.141.59.zip</a>	1.2 MB
<a href="#">selenium-html-runner-3.141.59.jar</a>	12.9 MB
<a href="#">selenium-java-3.141.59.zip</a>	7.2 MB
<a href="#">selenium-server-3.141.59.zip</a>	10.0 MB
<a href="#">selenium-server-standalone-3.141.59.jar</a>	10.2 MB

CLOSE ▶

- d. Download **Selenium-java-3.141.59.zip** and extract it.

3. To install the Chrome driver, first check the current Chrome browser version from  
Chrome settings > About Chrome

4. After that, go to <https://chromedriver.chromium.org/downloads> website and download the driver version that matches with chrome browser version.

5. Once this steps are done, open Eclipse and create a java project.

6. Click Right click on project file and select properties

7. No select libraries tab. On right side of the tab there is an option to Add external JARs

8. Select External JARs and import all the jar files that previously got extracted in step (2.d)

9. Select Apply and close. Now, selenium will run in eclipse.

If the JAR files are included yet showing errors,

10. Right click on project and Select Properties

11. Go to Java Compiler. Under JDK compliance, select compiler compliance level '**Java SE-1.8**'

12. Select Apply and Close. This should fix the previous error.

## **USE CASES COVERED FOR CREATE USER**

### **Screen Recording of Create User tests:**

[https://drive.google.com/file/d/1RYkXPBqOeG\\_Hxi6KWMdarcis1s1fiwS7/view?usp=drive\\_link](https://drive.google.com/file/d/1RYkXPBqOeG_Hxi6KWMdarcis1s1fiwS7/view?usp=drive_link)

## **ADD USER THROUGH ADMIN**

1. `createUserWithAllCredentials();`

### **Full Name**

2. `createUserWithOneCharFullName();`

3. `createUserWithHundredCharFullName();`

4. `createUserWithSpecialCharFullName();`

5. `createUserWithThirtyCharFullName();`

6. `createUserWithSpaceInFullName();`

7. createUserWithExistingFullName();

### **Gender**

8. createUserWithMaleGender();

9. createUserWithFemaleGender();

10. createUserWithOtherGender();

### **Institution Name**

11. createUserWithValidInstitutionName();

12. createUserWithEmptyInstitutionName();

### **Password**

13. createUserWithValidPassword();

14. createUserWithFiveCharPassword();

15. createUserWithFiveCharOneNumPassword();

16. createUserWithSixCharOneNumPassword();

17. createUserWithSixCharOneNumOneUpperCasePassword();

18. createUserWithSixLowerCaseCharOneNumOneUpperCaseOneSpecialCharPassword();

19. createUserWithSixUpperCaseCharOneNumOneUpperCaseOneSpecialCharPassword();

20. createUserWithOneUpperCaseFiveLowerCharOneNumOneUpperCaseOneSpecialCharPassword();

21. createUserWithOneUpperCasefiftyLowerCharOneNumOneUpperCaseOneSpecialCharPassword();

22. createUserWithTwelveCharOnenumOneSpecialCasePassword();

### **Role**

23. createUserwithManagerRole();

24. createUserwithAnnotatorRole();

25. createUserwithValidatorRole();

26. createUserwithGuestRole();

## **Email**

- 27. createUserWithValidEmail();
- 28. createUserWithDotInEmail();
- 29. createUserWithPlusSignInEmail();
- 30. createUserWithUnderscoreInEmail();
- 31. createUserWithHyphenInEmail();
- 32. createUserWithCombinationOfValidCharInEmail();

## **Invalid Email**

- 33. createUserWithEmptyEmail();
- 34. createUserWithoutAtEmail();
- 35. createUserEmailStartWithAt();
- 36. createUserEmailContainsSpace();
- 37. createUserEmailWithoutAT();
- 38. createUserEmailWithMinimumLength();
- 39. createUserEmailWithFiftyCharLength

## **Birthday Test**

- 40. createUserWithBirthDateOutsideLowerRange();
- 41. createUserWithBirthDateInsideRange();
- 42. createUserWithBirthDateOutsideHigherRange();

## **Qualification**

- 43. createUserWithValidQualification();
- 44. createUserWithEmptyQualification();
- 45. createUserWithLargeStringyQualification();

## **Phone Number Test**

- 46. createUserWithValidPhoneNumber();
- 47. createUserWithAllzeroPhoneNumber();
- 48. createUserWithMaximumLengthPhoneNumber();

```
49. createUserWithoutZeroOnePhoneNumber();
50. createUserWithMinimumLengthPhoneNumber();
51. createUserWithSpaceInPhoneNumber();
52. createUserWithStringInPhoneNumber();
```

## Test Case Desing strategy

For every test, boundary value analysis and equivalence class test is used to test edge cases and optimize test case number.

## ADD USER IMPLEMENTATION DETAILS

### Implementation sample of full name test case:

## Test creation of user using Hudred length full name string

[illegible]

## Implementation sample Gender tese case:

Implementation sample of creation of user assigning male gender

```
290
291 public void createUserWithMaleGender () throws InterruptedException {
292     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[3]/a/div")).click();
293     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div[2]/button")).click();
294
295     WebElement fullName = driver.findElement(By.name("full_name"));
296     WebElement gender = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[2]/select/option[2]"));
297     WebElement institution = driver.findElement(By.name("institution_name"));
298     WebElement password = driver.findElement(By.name("password"));
299     WebElement manager = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[5]/select/option[2]"));
300     WebElement email = driver.findElement(By.name("email"));
301
302     WebElement birthDay = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[2]/div[2]/input"));
303     WebElement qualification = driver.findElement(By.name("qualification"));
304     WebElement mobile = driver.findElement(By.name("mobile"));
305     WebElement add = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button"));
306
307
308     fullName.sendKeys("Demo Person05");
309     gender.click();
310     institution.sendKeys("NSU");
311     password.sendKeys("Password@123");
312     manager.click();
313     email.sendKeys("demo001454@gmail.com");
314
315     JavascriptExecutor js = (JavascriptExecutor) driver;
316     js.executeScript("arguments[0].value = '2002-03-18';", birthDay);
317
318     qualification.sendKeys("BSc");
319     mobile.sendKeys("01849909358");
320     add.click();
321
322     Thread.sleep(2000);
323     openDashboard();
324
325
326 }
327
```

## Implementation sample Institution name tese case:

Implementation sample of creation of empty institution name

```
477
478 public void createUserWithEmptyInstitutionName () throws InterruptedException {
479     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[3]/a/div")).click();
480     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div[2]/button")).click();
481
482     WebElement fullName = driver.findElement(By.name("full_name"));
483     WebElement gender = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[2]/select/option[2]"));
484     WebElement institution = driver.findElement(By.name("institution_name"));
485     WebElement password = driver.findElement(By.name("password"));
486     WebElement manager = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[5]/select/option[2]"));
487     WebElement email = driver.findElement(By.name("email"));
488
489     WebElement birthDay = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[2]/div[2]/input"));
490     WebElement qualification = driver.findElement(By.name("qualification"));
491     WebElement mobile = driver.findElement(By.name("mobile"));
492     WebElement add = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button"));
493
494
495     fullName.sendKeys("Kirk J Patterson");
496     gender.click();
497     // institution.sendKeys("North South University");
498     password.sendKeys("Password@123");
499     manager.click();
500     email.sendKeys("Kirk@gmail.com");
501
502     JavascriptExecutor js = (JavascriptExecutor) driver;
503     js.executeScript("arguments[0].value = '2002-03-18';", birthDay);
504
505     qualification.sendKeys("BSc");
506     mobile.sendKeys("01849909358");
507     add.click();
508
509     Thread.sleep(2000);
510     openDashboard();
511
512
513 }
514
```

## Implementation sample of password test case:

Implementation of password test case where password consists of Six characters, One number, and One upper case character.

```
666
667 public void createUserWithSixCharOneNumOneUpperCasePassword () throws InterruptedException {
668     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[3]/a/div")).click();
669     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div[2]/button")).click();
670
671     WebElement fullName = driver.findElement(By.name("full_name"));
672     WebElement gender = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[2]/select/option[2]"));
673     WebElement institution = driver.findElement(By.name("institution_name"));
674     WebElement password = driver.findElement(By.name("password"));
675     WebElement manager = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[5]/select/option[2]"));
676     WebElement email = driver.findElement(By.name("email"));
677
678     WebElement birthDay = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[2]/div[2]/input"));
679     WebElement qualification = driver.findElement(By.name("qualification"));
680     WebElement mobile = driver.findElement(By.name("mobile"));
681     WebElement add = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button"));
682
683
684     fullName.sendKeys("Daniel J Bolding");
685     gender.click();
686     institution.sendKeys("North South University");
687     password.sendKeys("Passwo1");
688     manager.click();
689     email.sendKeys("Daniel@gmail.com");
690
691     JavascriptExecutor js = (JavascriptExecutor) driver;
692     js.executeScript("arguments[0].value = '2002-03-18';", birthDay);
693
694     qualification.sendKeys("BSc");
695     mobile.sendKeys("01849909358");
696     Thread.sleep(2000);
697     driver.findElement(By.xpath("/html/body/div[3]/div/div/div[1]/img")).click();
698     //add.click();
699
700
701     openDashboard();
702
703 }
```

## Implementation of Creating user with different roles tests

Implementation sample of creating user with manager role

```
896
897 public void createUserWithManagerRole() throws InterruptedException {
898     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[3]/a/div")).click();
899     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div[2]/button")).click();
900
901     WebElement fullName = driver.findElement(By.name("full_name"));
902     WebElement gender = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[2]/select/option[2]"));
903     WebElement institution = driver.findElement(By.name("institution_name"));
904     WebElement password = driver.findElement(By.name("password"));
905     WebElement manager = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[5]/select/option[2]"));
906     WebElement email = driver.findElement(By.name("email"));
907
908     WebElement birthDay = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[2]/div[2]/input"));
909     WebElement qualification = driver.findElement(By.name("qualification"));
910     WebElement mobile = driver.findElement(By.name("mobile"));
911     WebElement add = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button"));
912
913
914     fullName.sendKeys("Paul C Hoehn");
915     gender.click();
916     institution.sendKeys("North South University");
917     password.sendKeys("Abcdefghijkl@");
918     manager.click();
919     email.sendKeys("Paul@gmail.com");
920
921     JavascriptExecutor js = (JavascriptExecutor) driver;
922     js.executeScript("arguments[0].value = '2002-03-18';", birthDay);
923
924     qualification.sendKeys("BSc");
925     mobile.sendKeys("01849909358");
926     add.click();
927
928     Thread.sleep(2000);
929     openDashboard();
930
931 }
```



## Implementation of Email validity check tests

Implementaiton sample of entering email where email consists of hyphen

```
1117
1118 public void createUserWithHyphenInEmail() throws InterruptedException {
1119     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[3]/a/div")).click();
1120     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div[2]/button")).click();
1121
1122     WebElement fullName = driver.findElement(By.name("full_name"));
1123     WebElement gender = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[2]/select/option[2]"));
1124     WebElement institution = driver.findElement(By.name("institution_name"));
1125     WebElement password = driver.findElement(By.name("password"));
1126     WebElement guest = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[5]/select/option[5]"));
1127     WebElement email = driver.findElement(By.name("email"));
1128
1129     WebElement birthDay = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[2]/div[2]/input"));
1130     WebElement qualification = driver.findElement(By.name("qualification"));
1131     WebElement mobile = driver.findElement(By.name("mobile"));
1132     WebElement add = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button"));
1133
1134
1135     fullName.sendKeys("Thomas B Harrison");
1136     gender.click();
1137     institution.sendKeys("North South University");
1138     password.sendKeys("Abcdefghijkl@");
1139     guest.click();
1140     email.sendKeys("Thomas-BHarrison.j@gmail.com");
1141
1142     JavascriptExecutor js = (JavascriptExecutor) driver;
1143     js.executeScript("arguments[0].value = '2002-03-18';", birthDay);
1144
1145     qualification.sendKeys("BSc");
1146     mobile.sendKeys("01849909358");
1147     add.click();
1148
1149     Thread.sleep(2000);
1150     openDashboard();
1151
1152
1153 }
```

## Implementation of Birthday test cases

Implementation sample of birthday test case where birthday is out of specified lower range

```
1536
1537 public void createUserWithBirthDateOutsizeLowerRange() throws InterruptedException {
1538     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[3]/a/div")).click();
1539     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div[2]/button")).click();
1540
1541     WebElement fullName = driver.findElement(By.name("full_name"));
1542     WebElement gender = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[2]/select/option[2]"));
1543     WebElement institution = driver.findElement(By.name("institution_name"));
1544     WebElement password = driver.findElement(By.name("password"));
1545     WebElement manager = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[5]/select/option[2]"));
1546     WebElement email = driver.findElement(By.name("email"));
1547
1548     WebElement birthDay = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[2]/div[2]/input"));
1549     WebElement qualification = driver.findElement(By.name("qualification"));
1550     WebElement mobile = driver.findElement(By.name("mobile"));
1551     WebElement add = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button"));
1552
1553
1554     fullName.sendKeys("George R Lenz");
1555     gender.click();
1556     institution.sendKeys("North South University");
1557     password.sendKeys("Password@123");
1558     manager.click();
1559     email.sendKeys("George@gmail.com");
1560
1561     JavascriptExecutor js = (JavascriptExecutor) driver;
1562     js.executeScript("arguments[0].value = '1845-01-01';", birthDay);
1563
1564     qualification.sendKeys("BSc");
1565     mobile.sendKeys("01849909358");
1566     add.click();
1567
1568     Thread.sleep(2000);
1569     openDashboard();
1570
1571 }
```

## Implementation sample of test case with empty qualification

```
1676     }
1677     public void createUserWithEmptyQualification() throws InterruptedException {
1678         driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[3]/a/div")).click();
1679         driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div[2]/button")).click();
1680
1681         WebElement fullName = driver.findElement(By.name("full_name"));
1682         WebElement gender = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[2]/select/option[2]"));
1683         WebElement institution = driver.findElement(By.name("institution_name"));
1684         WebElement password = driver.findElement(By.name("password"));
1685         WebElement manager = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[5]/select/option[2]"));
1686         WebElement email = driver.findElement(By.name("email"));
1687
1688         WebElement birthDay = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[2]/div[2]/input"));
1689         WebElement qualification = driver.findElement(By.name("qualification"));
1690         WebElement mobile = driver.findElement(By.name("mobile"));
1691         WebElement add = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button"));
1692
1693         fullName.sendKeys("James E Johnson");
1694         gender.click();
1695         institution.sendKeys("North South University");
1696         password.sendKeys("Password@123");
1697         manager.click();
1698         email.sendKeys("Johnsone@gmail.com");
1699
1700         JavascriptExecutor js = (JavascriptExecutor) driver;
1701         js.executeScript("arguments[0].value = '2002-03-18';", birthDay);
1702
1703         qualification.sendKeys("");
1704         mobile.sendKeys("01849909358");
1705         add.click();
1706
1707         Thread.sleep(2000);
1708         openDashboard();
1709     }
1710 }
```

## Implementation test case sample of all zero in phone number

```
1779     }
1780     public void createUserWithAllzeroPhoneNumber() throws InterruptedException {
1781         driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[3]/a/div")).click();
1782         driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div[2]/button")).click();
1783
1784         WebElement fullName = driver.findElement(By.name("full_name"));
1785         WebElement gender = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[2]/select/option[2]"));
1786         WebElement institution = driver.findElement(By.name("institution_name"));
1787         WebElement password = driver.findElement(By.name("password"));
1788         WebElement manager = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[1]/div[5]/select/option[2]"));
1789         WebElement email = driver.findElement(By.name("email"));
1790
1791         WebElement birthDay = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div[2]/div[2]/input"));
1792         WebElement qualification = driver.findElement(By.name("qualification"));
1793         WebElement mobile = driver.findElement(By.name("mobile"));
1794         WebElement add = driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button"));
1795
1796         fullName.sendKeys("Andrew B Zook");
1797         gender.click();
1798         institution.sendKeys("North South University");
1799         password.sendKeys("Password@123");
1800         manager.click();
1801         email.sendKeys("Andrew@gmail.com");
1802
1803         JavascriptExecutor js = (JavascriptExecutor) driver;
1804         js.executeScript("arguments[0].value = '2002-03-18';", birthDay);
1805
1806         qualification.sendKeys("abcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyz");
1807         mobile.sendKeys("000000000000");
1808
1809         Thread.sleep(2000);
1810         driver.findElement(By.xpath("/html/body/div[3]/div/div/div[1]/img")).click();
1811
1812         openDashboard();
1813     }
1814 }
1815
1816
1817 }
```

## Implementation of main method for create user

```
2016     }
2017     public static void main(String[] args) throws InterruptedException {
2018         AddUser users = new AddUser();
2019
2020         //valid everything
2021         users.logIn();
2022         users.createUser();
2023         users.createUserWithAllCredentials();
2024
2025         // Full Name
2026         users.createUserWithOneCharFullName();
2027         users.createUserWithHundredCharFullName();
2028         users.createUserWithSpecialCharFullName();
2029         users.createUserWithThirtyCharFullName();
2030         users.createUserWithSpaceInFullName();
2031         users.createUserWithExistingFullName();
2032
2033         ///Gender
2034         users.createUserWithMaleGender();
2035         users.createUserWithFemaleGender();
2036         users.createUserWithOtherGender();
2037
2038
2039         /// Institution Name
2040         users.createUserWithValidInstitutionName();
2041         users.createUserWithEmptyInstitutionName();
2042
2043         //Password
2044         //
2045         users.createUserWithValidPassword();
2046         users.createUserWithFiveCharPassword();
2047         users.createUserWithFiveCharOneNumPassword();
2048         users.createUserWithSixCharOneNumPassword();
2049         users.createUserWithSixCharOneNumOneUpperCasePassword();
2050         users.createUserWithSixLowerCaseCharOneNumOneUpperCaseOneSpecialCharPassword();
2051         users.createUserWithSixUpperCaseCharOneNumOneUpperCaseOneSpecialCharPassword();
2052         users.createUserWithOneUpperCaseFiveLowerCharOneNumOneUpperCaseOneSpecialCharPassword();
2053         users.createUserWithOneUpperCasefiftyLowerCharOneNumOneUpperCaseOneSpecialCharPassword();
2054         users.createUserWithTwelveCharOnenumOneSpecialCasePassword();
2055
2056         ///
2057         //Role
2058         users.createUserWithManagerRole();
2059         users.createUserWithAnnotatorRole();
2060         users.createUserWithValidatorRole();
2061         users.createUserWithGuestRole();
2062     }
```

```

2062 //      //Email
2063      users.createUserWithValidEmail();
2064      users.createUserWithDotInEmail();
2065      users.createUserWithPlusSignInEmail();
2066      users.createUserWithUnderscoreInEmail();
2067      users.createUserWithHyphenInEmail();
2068      users.createUserWithCombinationOfValidCharInEmail();
2069
2070 //      //invalid email
2071 //
2072      users.createUserWithEmptyEmail();
2073      users.createUserWithoutAtEmail();
2074      users.createUserEmailStartWithAt();
2075      users.createUserEmailContainsSpace();
2076      users.createUserEmailWithoutAT();
2077
2078 //
2079 //      //boundary value email
2080      users.createUserEmailWithMinimunLength();
2081      users.createUserEmailWithFiftyCharLength();
2082
2083 //
2084 //      //BirthDay test
2085      users.createUserWithBirthDateOutsizeLowerRange();
2086      users.createUserWithBirthDateInsideRange();
2087      users.createUserWithBirthDateOutsideHigherRange();
2088
2089 //      //Qualification
2090      users.createUserWithValidQualification();
2091      users.createUserWithEmptyQualification();
2092      users.createUserWithLargeStringyQualification();
2093
2094 //
2095 //      //phone Number test
2096      users.createUserWithValidPhoneNumber();
2097      users.createUserWithAllzeroPhoneNumber();
2098      users.createUserWithMaximumLengthPhoneNumber();
2099      users.createUserWithOutZeroOnePhoneNumber();
2100      users.createUserWithMinimumLengthPhoneNumber();
2101      users.createUserWithSpaceInPhoneNumber();
2102      users.createUserWithStringInPhoneNumber();
2103
2104      users.closeBrowser();
2105
2106      }
2107 }

```

## Test report for create user

Test Cases	Expected Output
createUserWithAllCredentials();	User Created successfully
createUserWithOneCharFullName();	User Name must be within 2 to 50 characters.
createUserWithHundredCharFullName();	User Name must be within 2 to 50 characters.
createUserWithSpecialCharFullName();	User Created successfully

createUserWithThirtyCharFullName();	User Created successfully
createUserWithSpaceInFullName();	User Created successfully
createUserWithExistingFullName();	User Created successfully
createUserWithMaleGender();	User Created successfully
createUserWithFremaleGender();	User Created successfully
createUserWithOtherGender();	User Created successfully
createUserWithValidInstitutionName();	User Created successfully
createUserWithEmptyInstitutionName();	User Created successfully
createUserWithValidPassword();	User Created successfully
createUserWithFiveCharPassword();	Password must contain at least 6 and at most 14 characters, at least one number, one lower case, one upper case letter and a one special character.
createUserWithFiveCharOneNumPassword();	Password must contain at least 6 and at most 14 characters, at least one number, one lower case, one upper case letter and a one special character.
createUserWithSixCharOneNumPassword();	Password must contain at least 6 and at most 14 characters, at least one number, one lower case, one upper case letter and a one special character.
createUserWithSixCharOneNumOneUpperCasePassword();	Password must contain at least 6 and at most 14 characters, at least one number, one lower case, one upper case letter and a one special character.
createUserWithSixLowerCaseCharOneNumOneUpperCaseOneSpecialCharPassword();	Password must contain at least 6 and at most 14 characters, at least one number,

	one lower case, one upper case letter and a one special character.
createUserWithSixUpperCaseCharOneNumOneU pperCaseOneSpecialCharPassword();	Password must contain at least 6 and at most 14 characters, at least one number, one lower case, one upper case letter and a one special character.
createUserWithOneUpperCaseFiveLowerCharOne NumOneUpperCaseOneSpecialCharPassword();	User Created successfully
createUserWithOneUpperCaseiftyLowerCharOne NumOneUpperCaseOneSpecialCharPassword();	Password must contain at least 6 and at most 14 characters, at least one number, one lower case, one upper case letter and a one special character.
createUserWithTwelveCharOnenumOneSpecialCa sePassword();	Password must contain at least 6 and at most 14 characters, at least one number, one lower case, one upper case letter and a one special character.
createUserwithManagerRole();	User Created successfully
createUserwithAnnotatorRole();	User Created successfully
createUserwithValidatorRole();	User Created successfully
createUserwithGuestRole();	User Created successfully
createUserwithvalidEmail();	User Created successfully
createUserwithDotInEmail();	User Created successfully
createUserwithPlusSignInEmail();	User Created successfully
createUserwithUnderscoreInEmail();	User Created successfully
createUserwithHyphenInEmail();	User Created successfully
createUserwithCombinationOfValidCharInEmail() ;	User Created successfully

createUserwithEmptyEmail();	Please Enter a valid email address
createUserwithoutAtEmail();	Please Enter a valid email address
createUserEmailStartWithAt();	Please Enter a valid email address
createUserEmailContainsSpace();	Please Enter a valid email address
createUserEmailWithoutAT();	Please Enter a valid email address
createUserEmailWithMinimunLength();	Sorry there seem to be an inactive/deleted user associated with this email, reactivate it or use a new email to register
createUserEmailWithFiftyCharLength();	prompt:looks like our system ran into some error
createUserWithBirthDateOutsizeLowerRange();	User Created successfully
createUserWithBirthDateOutsideHigherRange();	User Created successfully
createUserWithValidQualification();	User Created successfully
createUserWithEmptyQualification();	User Created successfully
createUserWithLargeStringyQualification();	User Created successfully
createUserWithValidPhoneNumber();	User Created successfully
createUserWithAllzeroPhoneNumber();	Create user button disabled
createUserWithMaximumLengthPhoneNumber();	User Created successfully
createUserWithOutZeroOnePhoneNumber();	Create user button disabled
createUserWithMinimumLengthPhoneNumber();	User Created successfully
createUserWithSpaceInPhoneNumber();	User Created successfully
createUserWithStringInPhoneNumber();	Create user button disabled

### Screen Recording of Create User tests:

[UserCreationTestsAutomation.webm](#)

## Screen Recording for Create Project

[https://drive.google.com/file/d/1d3jQsPVFu7KjzBmF0KXG4e5MFvb\\_8WXn/view?usp=drive\\_link](https://drive.google.com/file/d/1d3jQsPVFu7KjzBmF0KXG4e5MFvb_8WXn/view?usp=drive_link)

## Use Cases coverd for Create Project

1. Project with proper name and tag
2. Project with no name
3. Project with one character name and one tag
4. Project with two character name and eight tags
5. Project with three character name and one tag
6. Project with valid name and thirty eight tags
7. Project with thirty nine character name and two tags
8. Project with forty one character name and one tag
9. Project with valid name and thirty-nine tags
10. Project with forty characters with three tags
11. Project with valid name and no tag

## Test Case design strategy.

Boundary value analysis is used in this test to test project name is within range and all tags are working getting selected properly.

## Test case implementation details for Create Project:

Sample test case implementation of create project with forty one character name with one tag

```
132  
133 public void createProjectWithFourtyOnecharacterNameAndOneTag() throws InterruptedException {  
134     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div[1]/button")).click();  
135     Thread.sleep(1000);  
136     driver.findElement(By.name("name")).sendKeys("abdefghiJKLMNOPQRSTUVWXYZ");  
137     driver.findElement(By.name("description")).sendKeys("Annotation type:NER Tag:SSS");  
138     driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div/section[1]/div[1]/div/div[1]/div/button")).click();  
139     driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/div/div/section[1]/div[2]/div/div/div[1]/div/button/div")).click();  
140     Thread.sleep(2000);  
141     driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button")).click();  
142     Thread.sleep(2000);  
143     driver.findElement(By.xpath("/html/body/div[3]/div/div/div[1]/img")).click();  
144  
145  
146 }
```



## Test Report for Creating project

Test Cases	Expected Output
createProjectWithProperNameAndTag();	Project Created successfully
createProjectWithNoName();	Create button disabled
createProjectWithOnecharacterNameAndOneTag();	User Name must be within 2 to 50 characters.
createProjectWithTwocharacterNameAndOneTag();	Project Created successfully
createProjectWithThreecharacterNameAndEightTag();	Project Created successfully
createProjectWithThirtyNinecharacterNameAndTwoTags();	Project Created successfully
createProjectWithFortycharacterNameAndThreeTags();	Project Created successfully
createProjectWithFortyOnecharacterNameAndOneTag();	Project Created successfully
createProjectWithValidNameAndNoTag();	At least one task has to be picked
creatProjectWithValidNameAllTag();	Project Created successfully
creatProjectWithValidNameThirtyEihtTag();	Project Created successfully

## Screen Recording for Create Project

[CreateProjectTestsAutomation.webm](#)

## Screen Recording of Dashboard functionality test:

[https://drive.google.com/file/d/1GyN9y91akJpD3vY5LdmaGPJWQe9\\_Tz65/view?usp=drive\\_link](https://drive.google.com/file/d/1GyN9y91akJpD3vY5LdmaGPJWQe9_Tz65/view?usp=drive_link)

## Dashboard Functionality Test

### Use Cases Covered for Dashboard

1. Click On project view to test project page is working properly
2. Open Annotator then select an annotator and check the groups of that annotator
3. Open Guest and check the profile of Guest
4. Open Manager then select a manager to check manager profile
5. Open Validator and then select a validator to check the task and groups of that validator

## Implementation of sample openAnnotator

```
38 public void openAnnotator() throws InterruptedException {
39     driver.findElement(By.xpath("/html/body/div[2]/div[2]/section/div/div[1]/div[3]/div/button")).click();
40     Thread.sleep(2000);
41     driver.findElement(By.xpath("/html/body/div[2]/div[2]/section/div[3]/div[2]/div/table/tbody/tr[16]/td[3]/div/span[2]/a/img")).click();
42     Thread.sleep(2000);
43     driver.findElement(By.xpath("/html/body/div[2]/div[2]/section/div/div[1]/div/div[2]/a")).click();
44     Thread.sleep(2000);
45     openDashboard();
46     Thread.sleep(2000);
47 }
48
```

## Screen Recording of Log in as Annotator Functionality test

[https://drive.google.com/file/d/12Nj\\_CKFQtjYzPpz77u5ADajCn8zzOzoB/view?usp=drive\\_link](https://drive.google.com/file/d/12Nj_CKFQtjYzPpz77u5ADajCn8zzOzoB/view?usp=drive_link)

## Log in as Annotator Functionality test

1. logs in as annotator
  2. check dashboard
  3. Check projects
  4. Selects a project
  5. clicks on start
  6. logs out of the system
- This checks every function when logged in as annotator working perfectly.

## Implementation sample of using label hub as Annotator Automation

```
29 public void project() throws InterruptedException {
30     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[2]/a/div")).click();
31     Thread.sleep(2000);
32     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div/div[2]/div/table/tbody/tr/td[5]/div/a")).click();
33     Thread.sleep(2000);
34     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/section[4]/div/div/div[2]/div/table/tbody/tr[1]/td[5]/div/a")).click();
35     Thread.sleep(2000);
36     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[2]/a[2]/span")).click();
37     Thread.sleep(3000);
38     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[2]/a[2]/a[2]")).click();
39     Thread.sleep(2000);
40     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[2]/a[2]/a[3]")).click();
41     Thread.sleep(2000);
42     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[1]/a/div/span[2]")).click();
43     Thread.sleep(2000);
44     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[1]/nav/div/button")).click();
45     Thread.sleep(2000);
46     driver.findElement(By.xpath("/html/body/div[2]/div/div")).click();
47 }
48
49
50
```

## Screen Recording of Log in as ValidatorFunctionality test

[https://drive.google.com/file/d/1jIwvlMAEB6M6YXSxjoilFeUW4VAA8IBn/view?usp=drive\\_link](https://drive.google.com/file/d/1jIwvlMAEB6M6YXSxjoilFeUW4VAA8IBn/view?usp=drive_link)

### Log in as Validator functionality test

1. logs in as validator
2. check dashboard
3. Check projects
4. Selects a project
5. clicks on start
6. logs out of the system

This checks every function when logged in as validator working perfectly.

## Implementation sample of using label hub as Annotator Automation

```
29 public void project() throws InterruptedException {
30     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[2]/a/div")).click();
31     Thread.sleep(2000);
32     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/div/div[2]/div/table/tbody/tr[2]/td[5]/div/a")).click();
33     Thread.sleep(2000);
34     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/section[4]/div/div/div[2]/div/table/tbody/tr[1]/td[5]/div/a")).click();
35     Thread.sleep(2000);
36     driver.findElement(By.xpath("/html/body/div/section/main/aside/div/div/div/div[2]/a/div/span[2]")).click();
37     Thread.sleep(2000);
38     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[1]/nav/div/button")).click();
39     Thread.sleep(2000);
40     driver.findElement(By.xpath("/html/body/div[2]/div/div")).click();
41 }
42
43
44 public static void main(String[] args) throws InterruptedException {
45     ValidatorTestAutomation data = new ValidatorTestAutomation();
46     data.login();
47     Thread.sleep(2000);
48     data.project();
49 }
50
51
```

## Screen Recording of data page functionality test

[https://drive.google.com/file/d/1byEh79CKxxW822RWNSUzOq4-EOOQY2Kv/view?usp=drive\\_link](https://drive.google.com/file/d/1byEh79CKxxW822RWNSUzOq4-EOOQY2Kv/view?usp=drive_link)

### Data Page Functionality test

1. Logs in
2. Clicks data page
3. Goes to the second page of data
4. Views data
5. Clicks on export data sign
6. Select annotation type
7. Select annotator type
8. Exports data

This checks every function of Data page working perfectly.

### Sample Implementation of data page functionality test

```
43
44 public void exportData() throws InterruptedException {
45     Thread.sleep(2000);
46     driver.findElement(By.xpath("/html/body/div/section/main/div[2]/div[2]/section/section/div[2]/div/table/tbody/tr[4]/td[5]/div/button/img")).click();
47     Thread.sleep(2000);
48     driver.findElement(By.xpath("/html/body/div[3]/div/div/div[2]/section/div[3]/div/div/div/button")).click();
49     Thread.sleep(2000);
50     driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button")).click();
51     Thread.sleep(2000);
52     driver.findElement(By.xpath("/html/body/div[3]/div/div/div[3]/button")).click();
53
54 }
55
```

## Screen Recording of login & logout tests

[https://drive.google.com/file/d/1DwzZ\\_Xpio9vhp0jmH-zqgYveMUbu\\_sp/view?usp=drive\\_link](https://drive.google.com/file/d/1DwzZ_Xpio9vhp0jmH-zqgYveMUbu_sp/view?usp=drive_link)

### Use Cases Covered For Login:

#### For email field,

1. Valid email with valid password
2. Log in without email / keeping the email input field empty
3. Log in without domain name in email
4. Login in without '@' sign in email
5. Log in with email that starts with '@' sign
6. Login with email that consists empty space between characters

### For passowrd field,

1. Log in with valid password
2. Login with password of length 5
3. Login with Six length, One number, One special sign password
4. Login with No Numbers in password
5. Log in with No upperCase in the password
6. Login with No lowerCase in the password
7. Login with all numbers in the password
8. Login with all special characters in the password

### Test Case Strategy

Test cases are designed in such a way that they cover the equivalence classes and boundary values. In this case, testing with right below the lower limit of the required password length and variation of other special requirements such as making sure upper and lower case characters are included as well as special signs and inclusion of numbers are tested.

### Login Implementation details

Sample implementation for login with an email that starts with a '@' sign.

```
public void logInWithEmailStartsWithAt() throws InterruptedException {
    Thread.sleep(2000);
    driver.findElement(By.id("username")).clear();
    driver.findElement(By.id("password")).clear();
    driver.findElement(By.id("username")).sendKeys("@demogmail.com");
    driver.findElement(By.id("password")).sendKeys("Pass@1234");
    Thread.sleep(2000);
    driver.findElement(By.xpath("/html/body/div/div/div[2]/form/button")).click();
}
```

Sample implementation for login with five-length password,

```
public void logInWithFiveLengthPassword() throws InterruptedException {
    Thread.sleep(2000);
    driver.findElement(By.id("username")).clear();
    driver.findElement(By.id("password")).clear();
    driver.findElement(By.id("username")).sendKeys("fivlengthpassword@gmail.com");
    driver.findElement(By.id("password")).sendKeys("Pass@");
    Thread.sleep(1000);
    driver.findElement(By.xpath("/html/body/div/div/div[2]/form/button")).click();
}
```

## Log in main method implementation

```
194
195
196 public static void main(String[] args) throws InterruptedException {
197
198     SignInandSignoutTestsAutomation test = new SignInandSignoutTestsAutomation();
199     test.logIn();
200     // for email
201     test.logInWithoutemail();
202     test.logInWithoutAtsignInEmail();
203     test.logInWithoutDomaininEmail();
204     test.logInWithEmailStartsWithAt();
205     test.logInWithEmailwithSpace();
206
207     //for password password
208
209     test.logInWithValidPassword();
210     test.logInWithFiveLengthPassword();
211     test.logInWithIncorrectSixLengthOnenumberOnespecialSignPassword();
212     test.logInWithNonumberInPassword();
213     test.logInWithNoUpperCaseInPassword();
214     test.logInWithNoLowerCaseInPassword();
215     test.logInWithAllNumberPassword();
216     test.logInWithAllSpecialCharacterPassword();
217     test.logInWithProperEmailAndPassword();
218 }
```

## Test report for login

Test Cases	Output
A valid email with a valid password	logs in
login without email / keeping the email input field empty	Enter email prompt
Log in without domain name in email	Invalid email
Login in without the '@' sign in email	invalid email
login with an email that starts with '@' sign	invalid email

Login with email that consists empty space between characters	invalid email
Log in with valid password	Logs in
Login with password of length 5	Password must contain at least 6 and less than 14 characters
Login with incorrect Six length, One number, One special sign password	Incorrect email or password
Login with No Numbers in password	Please give at least one number, one lower and upper case letter, one special character
Log in with No upperCase in the password	Please give at least one number, one lower and upper case letter, one special character
Login with No lowerCase in the password	Please give at least one number, one lower and upper case letter, one special character
Login with all numbers in the password	Please give at least one number, one lower and upper case letter, one special character
Login with all special characters in the password	Please give at least one number, one lower and upper case letter, one special character

Every Successful log in ends up doing logout test as well.

Here is the compilation of test running screen recordings of label hub testing.

[Label Hub testing and automation videos Faisal Mahmud 2011523642](#)