**SDET - Internship tasks - Solutions**

**1. Test function and create input/output data sets, describe**

**which cases this data set will test:**

**Function description:**

*Find the length of the longest substring without repeating characters in the given*

*string `s`.*

**Table of data sets:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Input | Output | | | Remarks |
| - | - | Final unique substrings: | count: | length: | - |
|  |  | No input entered, exiting. | | | Without input – empty submit |
|  | a | [a] | 1 | 1 |  |
|  | ab | [ab] | 1 | 2 |  |
|  | abc | [abc] | 1 | 3 |  |
|  | abca | [abc, bca] | 2 | 3 |  |
|  | abcabcbb | [abc, bca, cab] | 3 | 3 | Example from task |
|  | 1234567890 | [1234567890] | 1 | 10 | All different digits |
|  | 1234qwer1234 | [1234qwer, 234qwer1, 34qwer12, 4qwer123, qwer1234] | 5 | 8 | Digits and letters |
|  | 123qweasdzxc456rtyfghvbn | [123qweasdzxc456rtyfghvbn] | 1 | 24 | Many digits and letters |
|  | !@#$%^&\*()\_+[]{};’:”,.<>/? | [!@#$%^&\*()\_+[]{};’:”,.<>/?] | 1 | 26 | Signs, characters |
|  | 1 6 j 8 ee j 7 5 | [1 6, 8 e, j 7, 7 5] | 4 | 3 | Using “space” key |
|  | bf2938f239.[..]e[.[5.g?=--,3-40,f,34,f- /[/-43lv9f340 9fk3f[,34f349 fk3c9m |  |  |  | Checking maximal input, compiler (<https://www.programiz.com/javascript/online-compiler/>) haven’t printed all of output. |
|  | bf2938f239.[..]e[.[5.g?=--,3-40,f,34,f- /[/-43lv9f340 9fk3f[,34f349 |  |  |  | String shorter than above, result the same. |

Above data set can test various cases (user input):

1. Empty input.
2. Only letters input.
3. Only digits.
4. Mix of letters and digits.
5. Different signs and characters.
6. Using “space” key while typing.
7. Too big input.

There might be some variations of above test cases, but mostly they will be connected with those mentioned above.

**2. UI testing** (JS/TS)

Create test-cases for successful and unsuccessful login, and any additional test-cases you might think it would be good to add.

<http://uitestingplayground.com/sampleapp>

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test scenario | Test Case | Test Data | Expected Result | Actual result |
| Login functionality | Empty username and empty password. | Username:  Password: | Invalid username/password | Invalid username/password |
| Empty username and valid password | Username:  Password:  pwd | Invalid username/password | Invalid username/password |
| Valid username and unvalid password. | Username:  1  Password: | Invalid username/password | Invalid username/password |
| Valid username and valid password. | Username:  1  Password:  pwd | Welcome, 1! | Welcome, 1! |
| Reloading page in browser | Username:  1  Password:  pwd | User still looged in. | User logged out. |
| Typing to omany characters in „login box” | Username:  1111111111  1111111111  1111111111  1111111111  Password:  pwd | Response: too many characters typed in. | Welcome, 11111111111111111111  11111111111111111111! |
|  | Checking if password is masked | Username:  1  Password:  11111111 | Password is masked | Password was masked |
|  | Checking if password can be copied | Username:  1  Password:  11111111 | Password should not be allowed to be copied. | I could copy password. |
|  | Checking if user is still logged in after cliking „forward” and „backward” in browser | Username:  1  Password:  pwd | Welcome, 1! | User logged in or other response of being logged. |
|  | Clicking:  „Log out” | Username:  1  Password:  pwd | User logged out. | User logged out. |