

<https://crackedcalc.herokuapp.com/>

## TEST PLAN

- **General information**

This test plan takes into account all the necessary activities and approaches for testing the “Cracked Calculator” application.

- **Test objectives**

Testing objectives - to make sure that the “Cracked Calculator” application works according to the stated requirements and specifications. The following activities will be performed:

1. check the graphical user interface;
2. check the main functionality of the application and his ability to work.

- **Assumptions**

1. QA team is always informed about the changes in requirements;
2. Required tools for testing are installed and configured;
3. QA environment, bugtraking, test case management system are up.

- **Testing Scope**

**Features to be tested:**

1. Functionality of individual fields and buttons;
2. Interaction of buttons and all fields with each other.

**Features not to be tested:**

1. Database operation.

- **Testing Strategy**

**Test levels:**

- **unit testing** - verify individual fields for data entry;
- **system testing** - verify the interaction of all modules;

**Test types:**

- **functional testing** (check the work of the main functionality of the application):
  1. **positive testing** - checking for valid values;
  2. **negative testing** - checking for invalid values;

- **non-functional testing** (checking the non-functional characteristics of the application):
  1. **UI testing** - checking the interface for the presence of all elements specified in the requirements;
  2. **Localization testing** - checking the application for adaptation to different languages;
  3. **Compatibility testing** - check the operation of the application with different environments

#### Depth testing:

- **smoke testing** - check that the major functionality works as required
- **critical path testing** - checking typical user scenarios

#### Testing Strategy:

- **black-box** - checking the application work without access to the code

#### Testing approaches:

- **end-to-end testing**
- **exploratory testing**

### ● Acceptance criteria

1. Testing is stopped after all test cases are executed
2. Testing is stopped after all blockers, critical and major bugs are fixed

### ● Testing Schedule

№	Milestone name	scheduled date	actual date
1	Planning phase start	16.05.21	17.05.21
2	Planning phase ends	17.05.21	18.05.21
3	Test design	18.05.21	19.05.21

4	UI testing	19.05.21	19.05.21
5	Functional testing	19.05.21	19.05.21
6	Non-functional testing	19.05.21	19.05.21
7	Generating a final test report	20.05.21	20.05.21
8	Product release	21.05.21	21.05.21

### ● Resources

1. **Hardware:** No special recommendations
2. **Software:** - Google Chrome 90.0.4430.212  
- Opera 76.0.4017.123  
- Google Chrome 89.0.4389.90
3. **Tools:** - Jira Software  
- Google Docs

## Check List

ID	To Check	Status	Comment
<b>UI (Smoke) testing</b>			
1	loading the application	Passed	
2	the presence of fields: "value 1", "value2", "solution".	Passed	
3	presence of buttons: "add", "subtract", "multiply", "divide".	Passed	
<b>For module button “ADD”</b>			
<b>Positive tests</b>			
4	enter in the field "value 1" and in	Blocked	

	the field "value2" spaces before the numbers		<b>“add” button doesn't work</b> <a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-17">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-17</a>
5	enter numbers on en / rus/chinese	Blocked	
6	enter numbers in both fields with a separator "." (dot)	Blocked	
7	enter numbers in both fields with a "," (comma) separator	Blocked	
8	paste the copied text into both fields ("value1" and "value2")	Blocked	
<b>Negative tests</b>			
9	enter letters (Latin / Cyrillic) in the "value1" field	Blocked	<b>“add” button doesn't work</b> <a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-17">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-17</a>
10	enter letters (Latin / Cyrillic) in the "value2" field	Blocked	
11	Leave the "Value 1" field empty, enter valid data in the "Value2" field	Blocked	
12	Leave blank the "Value 2" field, enter valid data in the "Value1"	Blocked	
13	enter spaces between the numbers in the "value 1" and "value2"	Blocked	
14	enter numbers with letters and special symbols in both fields	Blocked	
15	enter non-significant zeros before numbers in both fields (0001)	Blocked	
<b>For module button “Subtract”</b>			

Positive tests			
16	enter in the field "value 1" and in the field "value2" spaces before the numbers	Blocked	<b>the "subtract" button adds numbers (acts as the "add" button)</b> <a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-24">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-24</a>
17	enter numbers on en / rus/chinese	Blocked	
18	enter numbers in both fields with a separator "." (dot)	Blocked	
19	enter numbers in both fields with a "," (comma) separator	Blocked	
20	paste the copied text into both fields ("value1" and "value2")	Blocked	
Negative tests			
21	enter letters (Latin / Cyrillic) in the "value1" field	Blocked	<b>the "subtract" button adds numbers (acts as the "add" button)</b> <a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-24">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-24</a>
22	enter letters (Latin / Cyrillic) in the "value2" field	Blocked	
23	Leave the "Value 1" field empty, enter valid data in the "Value2" field	Blocked	
24	Leave blank the "Value 2" field, enter valid data in the "Value1"	Blocked	
25	enter spaces between the numbers	Blocked	

	in the "value 1" and "value2" fields		<a href="#">sue=CALC-24</a>
26	enter numbers with letters and special symbols in both fields	Blocked	
27	enter non-significant zeros before numbers in both fields (0001)	Blocked	
For module button “Multiply”			
Positive tests			
28	enter in the field "value 1" and in the field "value2" spaces before the numbers	Blocked	“multiply” button doesn't work
29	enter numbers on en / rus/chinese	Blocked	
30	enter numbers in both fields with a separator "." (dot)	Blocked	
31	enter numbers in both fields with a "," (comma) separator	Blocked	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssues=CALC-29">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssues=CALC-29</a>
32	paste the copied text into both fields ("value1" and "value2")	Blocked	
Negative tests			
33	enter letters (Latin / Cyrillic) in the "value1" field	Blocked	“multiply” button

34	enter letters (Latin / Cyrillic) in the "value2" field	Blocked	<b>doesn't work</b> <a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jsps?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-29">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jsps?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-29</a>
35	Leave the "Value 1" field empty, enter valid data in the "Value2" field	Blocked	
36	Leave blank the "Value 2" field, enter valid data in the "Value1" field	Blocked	
37	enter spaces between the numbers in the "value 1" and "value2" fields	Blocked	
38	enter numbers with letters and special symbols in both fields	Blocked	
39	enter non-significant zeros before numbers in both fields (0001)	Blocked	
<b>For module button “Divide”</b>			
<b>Positive tests</b>			
40	enter in the field "value 1" and in the field "value2" spaces before the numbers	Failed	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jsps?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-16">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jsps?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-16</a>
41	enter numbers on en / rus/chinese	Passed	

42	enter numbers in both fields with a separator "." (dot)	Passed	
43	enter numbers in both fields with a "," (comma) separator	Failed	does not allow the possibility of entering a comma as a separator for the integer and real parts of a number
44	paste the copied text into both fields ("value1" and "value2")	Passed	
45	in the "value 1" field enter 0, in the "value2" field enter any valid value	Failed	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-4">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-4</a>
46	in the fields "value 1" and "value2" enter any valid floating point number (2.3E2)	Passed	



### Negative tests

47	enter letters (Latin / Cyrillic) in the "value1" field	Failed	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-9">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-9</a>
48	enter letters (Latin / Cyrillic) in the "value2" field	Failed	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-9">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-9</a>
49	Leave the "Value 1" field empty, enter valid data in the "Value2" field	Failed	similar to item 46 (no error notification occurs)
50	Leave blank the "Value 2" field, enter valid data in the "Value1" field	Failed	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-6">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-6</a>
51	enter spaces between the numbers in the "value 1" and "value2"	Failed	no error message

	fields		appears in the "solution" field
52	enter numbers with letters and special symbols in both fields	Failed	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-18">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-18</a>
53	enter non-significant zeros before numbers in both fields (0001)	Failed	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-23">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-23</a>
54	in the "value1" field enter any number except 0, in the "value2" field enter 0	Failed	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-5">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-5</a>

## Test cases

**ID:** 1

**Title:** Check that the "add" button performs its functions correctly

**Pre-condition:** 1. Open page <https://crackedcalc.herokuapp.com/>

**Steps:** 1. Type correct values in the fields: "Value1", "Value2" (1,2)  
2. Click button "Add"

**Expected result:** The numbers are added and the correct result is returned

**Priority:** P1

**ID:** 2

**Title:** Check that after entering incorrect data in the "value1" and "value2" fields, an error message is generated

**Pre-condition:** 1. Open page <https://crackedcalc.herokuapp.com/>

**Steps:** 1. Type incorrect values (numbers with letters and special symbols) in the fields: "Value1", "Value2" (1K%)

2. Click button "Divide"

**Expected result:** An error message appears in the "Solution" field after entering incorrect data

**Priority:** P2

## Test report

Hello, Alex

QA team has completed smoke (UI) test and critical path testing for 4 modules on build№1. Smoke (UI) test failed. Critical path testing failed due to critical defects which need to be fixed ASAP, see explanations below.

**Test level:** Smoke testing, critical path testing

**QA team:** Testing was performed by junior QA - Alina Matsveuk, Alina Zhukovskaya, Irina Lishchenko, Alesya, Konstantin Mishchenko

**Checkpoints:** total amount - 54

blocked - 36

passed - 7

failed - 11

**Defects:** total amount - 11

Status	Amount	Link
critical	5	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-4">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-4</a>
		<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-5">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-5</a>
		<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-18">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-18</a>
		<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-19">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-19</a>

		<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-29">iew=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-29</a>
		<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-17">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-17</a>
major	1	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-24">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-24</a>
minor	4	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-16">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-16</a>
		<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-23">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-23</a>
		<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-6">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-6</a>
		<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-9">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-9</a>
trivial	1	<a href="https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-25">https://digital-unicorn5.atlassian.net/secure/RapidBoard.jspa?rapidView=3&amp;projectKey=CALC&amp;modal=detail&amp;selectedIssue=CALC-25</a>

Testing was started on the planned date (05.19), but was not completed due to the presence of critical defects that block 36 checkpoints.

Testing of the critical path (for three modules) has failed, so at the moment there is no way to release the application.

After the development team fixes the errors, the main functionality will be re-tested according to the prepared checklist, and if all tests are successfully passed, we will be able to release them.

Thanks,

Alina