

The list of the requirements for the calculator application.

Business Requirements

1 Company employees need a calculator application.

User Requirements

2 The users can work in 2 modes – simple and scientific.

3 In simple user can add, subtract, multiply and divide.

4 In scientific user can perform squaring and square root extraction.

5 The users is to be able to see the actions performed and the result.

6 The user should have an access to user guide.

7 The user must be able to enter data from the keyboard and from the virtual keyboard

Functional Requirements

8 Calculations use integers and decimals rounded to 2 decimal places.

9 The maximum sequence of number per screenset is 20 symbols.

10 When the user presses the "Выбор" button, user select modes – simple and scientific.

11 After the user select simple mode the user will be available add, subtract, multiply and divide.

12 After the user select scientific mode to simple mode will be added perform squaring and square root extraction.

13 Default value on the screen is 0.

14 When the user presses the "О программе" button, the user guide opens.

15 When the user presses the "0" button in the input line displays the value 0.

16 After the user presses the "0" button the number 0 is taken into account in the subsequent mathematical calculation.

17 When the user presses the "1" button in the input line displays the value 1.

18 After the user presses the "1" button the number 1 is taken into account in the subsequent mathematical calculation.

19 When the user presses the "2" button in the input line displays the value 2.

20 After the user presses the "2" button the number 2 is taken into account in the subsequent mathematical calculation.

21 When the user presses the "3" button in the input line displays the value 3.

22 After the user presses the "3" button the number 3 is taken into account in the subsequent mathematical calculation.

23 When the user presses the "4" button in the input line displays the value 4.

24 After the user presses the "4" button the number 4 is taken into account in the subsequent mathematical calculation.

25 When the user presses the "5" button in the input line displays the value 5.

26 After the user presses the "5" button the number 5 is taken into account in the subsequent mathematical calculation.

27 When the user presses the "6" button in the input line displays the value 6.

28 After the user presses the "6" button the number 6 is taken into account in the subsequent mathematical calculation.

29	When the user presses the "7" button in the input line displays the value 7.
30	After the user presses the "7" button the number 7 is taken into account in the subsequent mathematical calculation.
31	When the user presses the "8" button in the input line displays the value 8.
32	After the user presses the "8" button the number 8 is taken into account in the subsequent mathematical calculation.
33	When the user presses the "9" button in the input line displays the value 9.
34	After the user presses the "9" button the number 9 is taken into account in the subsequent mathematical calculation.
35	When the user presses the "," button in the input line displays the value ,.
36	After the user presses the "," button the user can enter 1 or 2 natural numbers.
37	After the user presses the "," button and enter 1 or 2 natural numbers the user can enter all valid mathematical operations.
38	When the user presses the "+" button in the input line displays the value +.
39	After the user presses the "+" button perform the mathematical operation addition.
40	When the user presses the "-" button in the input line displays the value -.
41	After the user presses the "-" button perform the mathematical operation subtraction.
42	When the user presses the "/" button in the input line displays the value /.
43	After the user presses the "/" button perform the mathematical operation division.
44	When the user presses the "*" button in the input line displays the value ×.
45	After the user presses the "*" button perform the mathematical operation multiplication.
46	When the user presses the "x ² " button in the input line displays the value ^2.
47	After the user presses the "x ² " button perform the mathematical operation squaring.
48	When the user presses the "√" button in the input line displays the value √.
49	After the user presses the "√" button perform the mathematical operation square root extraction.
50	When the user presses the "=" button the all entered data disappears and only the result of calculations is displayed on the screen.
51	After the user presses the "=" button mathematical calculation of previously selected operations is carried out with all entered data.
52	When the user presses the "<" button cancels the last entered action.
53	After the user presses the "<" button disappear the last entered symbol on the screen.
54	When the user presses the "C" button cancels all entered action and show default value on the screen.
55	When the user presses the "+/-" button after positive values in the input line displays the same value will be displayed only with - in front of it.
56	When the user presses the "+/-" button after negative values in the input line displays the same value will be displayed only without - in front of it.
57	After the user presses the "+/-" button after negative value that value will change to positive form.
58	After the user presses the "+/-" button after positive value that value will change to negative form.
59	Mathematical calculations in accordance with mathematical laws, but in accordance with the sequence of input
60	In case of incorrect calculation (dividing by 0, the square root of a negative number) cancels all entered action and show default value on the screen.

Non-Functional Specifications

61	The application must be in Russian language.
62	The application icon should be in accordance with Picture 2.
63	The application icon should be located in the upper left corner.
64	The application should be called "Калькулятор"
65	The application name should be located on the left next to the application icon.
66	Ensuring application compatibility with Windows from Windows 7 to Windows 11.
67	Application file format must be .exe
68	To open the application, you should double-click on the calculator executable file (.exe).
69	The application should have an user guide which should be called "О программе".
70	The input line should be white color.
71	The color of the inscriptions in the application should be black color.
72	The color of the displayed data in the input line should be black color.
73	The design and location of the calculator and all necessary buttons should be in accordance with the GUI schema.
74	Simple modes the calculator should be contain all the buttons presented in the GUI schema except for "x ² " and "√" buttons (Picture 1).
75	Scientific modes the calculator should be contain all the buttons presented in the GUI schema (Picture 1).
76	The font in the application according to GUI schema.
77	When the user presses the button in the application, a virtual keyboard press should be imitation.
78	The functionality of the minimize "_" and close "×" the application buttons should correspond to the behavior of the Windows operating system.
79	Expand app button "□" functionality is disabled.
80	The user can't zoom in the application.
81	The user cannot open several calculators at the same time.
82	The application doesn't allow data entry using the copy & paste and drag-and-drop method.
83	The calculator executable file should be less than 100 Mbytes.
84	The application should be removed only by removing the calculator executable file (.exe) from user computer.
85	The application can work with all applications on the computer.
86	The data entry will be carried out in accordance with the GUI schema.