The goal of the project is to determine the appropriate type of earthing device for a specific object. It is presented how the level of protection of the observed object is calculated, taking into account the equivalent area of ​​the observed object, the city near which the observed object is located and the characteristics of the observed object. Then a specific earthing device is entered from the list of earthing devices and the parameters of that earthing device are selected. At the end, it is examined whether the selected earthing device and its parameters satisfy ohmic resistance value , depending on the observed object and the specific density of the surrounding soil.

Depending on the equivalent area of ​​the object and the city near which the object is located, the program calculates the density coefficient of atmospheric discharge into the ground Ng and the coefficient of average discharge density Nd.

Based on the coefficients C1, C2, C3 and C4, which depend on the characteristics of the observed object, the program calculates the damage risk analysis coefficient Nc and the lightning protection installation efficiency coefficient Er.

In the next step, the level of protection of the observed object is determined according to the calculated value of the Er coefficient.

The program then opens the file "List of Earthing devices.txt" and asks us to select the type of earthing device from the file that we want to predict for our object.

If none of the earthing devices is selected from offered list, the program displays on the screen that we did not select any of the offered earthing devices and the program then ends.

In the file "Inrush Resistance.txt" are placed the ohmic resistance values ​​above which must not be the resistance value of our earthing device for a certain level of protection and for a certain value of the resistance of the soil in which the earthing device is placed.

In the next step, we examine whether the selected earthing device is satisfactory in terms of ohmic resistance.

We call the "calculate" function, which calculates the value of the impact ohmic resistance of the earthing device, depending on the level of protection of the object and the specific resistance of the ground, which must be greater than the inrush ohmic resistance of the selected earthing device. Within the "calculate" function, we call the "grounding testing" function, which compares the inrush ohmic resistance of our selected ground electrode and the inrush ohmic resistance calculated depending on the object's protection level and the specific resistance of the surrounding ground of the ground electrode.

Then we print a message on the screen whether the selected ground electrode is satisfactory in terms of inrush ohmic resistance or not.

If the selected ground electrode is satisfactory, the program ends. If it is not satisfactory, the program asks to reselect the ground electrode from the list and repeat the entire procedure until we choose the appropriate ground electrode.