Lotka (1925) and Volterra (1926) formulated parameteric differential equations that characterize the oscillating populations of predators and prey. This program was created in 2020 as a helpfool tool for prediction of predator-prey biological interaction. Program creates plots that illustrate how populations of prey and predators interact and how the dependance looks. Calculations are based on the Lotka–Volterra equations, also known as the predator–prey equations, which allows us to study the population growth depending on the coefficients such as predation rate and conversion.

The model takes the following assumptions:

 - In the environment there are only two species: the prey and the predators, other species do not interfere with them.
 - If there are no predators in the environment, prey have favorable conditions and their population increases exponentially.
 - If there are no prey left in the environment, the predators do not have enough food, which means extinction of the species (population size decreases exponentially).
 - Assuming that both species exist in the environment, some part of prey are killed by predators. Food provides the energy necessary for predators for reproduction, and thus the size of their population grows.
 - If both population sizes are initially positive, the populations will oscillate in a fixed pattern indefinitely, remaining positive.
 - If both population sizes are initially zero, the population sizes will remain zero.
 - If the predator population size is zero and the prey population size positive, the predator population size remains zero and the prey population grows without bound.
 - If the predator population size is positive and the prey population size zero, the prey population size remains zero while the predator population shrinks toward zero size.

Read "Help" to get more information about how to use the program.