The goal of this bachelor thesis is to inform the readers about an integral and integrodifferential equations theory and the relation between them. It formulates also theorems about a kernel and a resolvent, the terms closely related to these types of equations. The Laplace transform and a convolution are a calculating device which plays the important role. The next main topic is population models and models based on the integrodifferential equations and subsequently we try to use gained knowledge to solve the concrete given model.