This work solves jewelry distribution problem using the theory of integer programming. In theoretical part we present basic definitions and fundamental theory of integer programming. Theoretical part also presents detailed description of the Branch and bound algorithm. Practical part tackles a real world problem. The goal of the practical part is to optimaly distribute jewelry of the chosen brand to their butiques. Firstly, we present the creation of the integer programming model that solves this problem considering multiple criteria. Secondly, in practical part we present the description of the input data and also the analisis of the result of distribution of the input data using proposed model for 3 diferent combinations of input parameters.