In this work we propose a method of automatic content-based bitmap pictures classification into classes like buildings, landscapes, photographs etc. The method uses concepts of the machine learning, concretely the mechanism of a decision tree. We extract characteristics like the contrast, the distribution of colors, the presence of straight lines. On the basis of these characteristics the decision tree is built using the algorithm ID3. Creation of the program, which allows operations with the database of images based on the classification results – retrieval, sorting into directories etc. is also a part of the work. The method shows rate 75-85% correct within the classes.