Detection of keypoints from image and their characterization by using descriptors is common technique in some branches of computer vision. The goal of this thesis is to explore and confirm usability of this technique for similarity retrieval in image collections. For this purpose it will be created a web application used for collecting ratings of similarity from users which will be subsequently compared with results computed by the implementation of SURF algorithm, one of algorithms used for detection and description of image keypoints. It will also be discussed the impact of metrics and parameters influencing results of computation of similarity between images and it will be made an effort to find settings for which computed results will be closest to user's similarity perception.