

LSPrec is a recommender system that helps users to make decisions. Users have several competitive alternatives, and they want to compare them and select the best alternative. For example, if you are using LSPrec, you can have two job offers and you want to compare them with your current job. A similar decision problem is the evaluation of home: there is a home that you can buy, and you want to know the degree of satisfaction of your requirements that the analyzed home should satisfy. LSPrec is a logical scoring system that helps you to specify your requirements and create the final result as an overall score, expressed as the percent of satisfied requirements.

All decision problems are organized as LSPrec projects. Each decision project is realized as a sequence of the following six steps:

Step 1. At the beginning, we must declare what is the object which we want to evaluate. E.g., we want to evaluate one or more homes.

Step 2. In this step we systematically develop the decision components that affect the satisfaction of our requirements. These components are called suitability attributes, because they affect the suitability of the analyzed object. E.g., in the case of home, we can consider the home quality, and the suitability of the home location. Then, the home location can be decomposed into the distance from job for parents, and the distance from school for children. Step by step, we continue the decomposition process until we create all relevant decision components that cannot be further decomposed. These are suitability attributes.

Step 3. For each suitability attribute, we now define our specific requirements (an evaluation criterion). E.g., we prefer small values of the distance from home to school (an ideal value could be 5 minutes or less, and an unacceptable value could be 20 minutes or more).

Step 4. Evaluation of individual decision components generates a set of suitability scores, expressed as percentages of satisfied requirements. In this step we select how to logically combine these components to compute the overall suitability of each competitor.

Step 5. In this step we introduce one or more competitors (alternatives). For each competitor we must enter their values of suitability attributes. E.g., in the case of home evaluation, we enter the number of bedrooms, the available area, the distance from school, the cost, etc.

Step 6. In this final step, LSPrec performs all necessary calculations and shows the final results of evaluation, i.e., the overall suitability of each competitor. We use these results to confidently make a justifiable and explainable decision.

LSPrec uses the *navigation system* based on “Continue” and “Back” buttons between all steps. With “Continue” button we go to the next step, and with “Back” button we go to the previous step. LSPrec saves all data that the user enters. So, the navigation system permits users to revisit all steps and easily modify data that need editing or expanding.