Multidimensional contingency tables are suitable tool for capturing the count of observations of multiple categorical variables. There are more complex relationships amongst multiple variables which cannot be captured by analytical tools for two variables. In this work, we introduced log-linear models and showed their application on three dimensional tables. We focused on statistical program SPSS, in which we showed analysis on the sample data including the interpretation. We redone the analysis on another artificial data capturing the possible situations which could researcher encounter in the real life. The sample data were also analyzed in statistical program R.