Lab # 1

NOTE. **For this lab you need subsample with 3-5 random variables, at least half of them should be described with continuous random variable type.**

Step 1. Choose subsample with main variables for your further analysis. Then for each of them:

Step 2. You need to make a non-parametric estimation of PDF in form of histogram and using kernel density function (or probability law in case of discrete RV).

Step 3. You need to make an estimation of order statistics and represent them as "box with whiskers" plot.

Step 4. Find one or several theoretical distributions that could describe your sample on a basis of non-parametric analysis results.

Step 5. Estimate parameters of chosen distributions using methods of maximum likelihood and least squares method.

Step 6. Validate your estimated parameters using QQ biplots.

Step 7. Estimate correctness of fitted distributions using at least 2 statistical tests.