This bachelor thesis deals with the estimation of loss reserves in non-life insurance. To construct these estimates we use SUR model, which allows to include correlations between run-off triangles, input data. This SUR based model due to inclusion of correlations embraces dependencies between each of run-off triangles. Thanks to this extension of standard loss reserving technique it makes our estimates more precise and more corresponding to real observations. In this thesis apart from introduction of the model we also elaborate numerical example using different variations of this specific model and lastly we compare SUR based model with standard model for loss reserve estimation.