This bachelor's thesis deals with the comparison of WRF simulation results using the Large Eddy Simulation (LES) and physical parametrization at lower resolution. The first part is dedicated to the turbulent flow and Navier-Stokes equations. This part also contains basic information on the methods by which we can model the turbulent flow. These methods are DNS, RANS and LES. In the next part, atmospheric numerical models are presented and the WRF model is described in more detail, including a description of its execution. The main part of the thesis deals with the description of the performed simulations and the comparison of the results. The results obtained are compared first with real data and then for individual simulations with different parameterizations.