In the thesis we analyse qualitative properties of dynamical systems near equilibria. We mainly deal with planar equations. The key notion is the stability of steady state. The stability analysis is closely connected to linearisation, which in many cases doesn't suffice. In that case Lyapunov function may help. We define stable and unstable manifold, basin of attraction, topological equivalence of equations and demonstrate their significance in qualitative analysis. The theory will be illustrated on examples. In the third chapter we briefly mention numerical continuation of steady states with respect to a parameter.