Abstract: Bruhat-Tits buildings are a fundamental concept in the study of linear algebraic groups over general fields. The general goal of this thesis is to introduce buildings in the basic case of $SL_d(\mathbb{Q}_p)$ and to explicitly describe some of their geometrical and combinatorial properties – building are abstract simplicial complexes. After the general construction (Chapter 1) we focus in detail to the case of $SL_2(\mathbb{Q}_p)$. We work with simplices using certain matrix representatives. We explicitly describe the building and give a formula for graph distance. In Chapter 3 we consider the general case $SL_d(\mathbb{Q}_p), d \geq 2$. There we introduce a new concept of distance formulas. In Chapter 4 we prove some theorems which are satisfied by buildings in general. Chapter 5 studies the problem of determining so-called gallery distance of two simplices. In the last Chapter 6 we generalize the distance formulas to the case of three vertices.