

## Abstract

The notion of an absolute value of a field  $K$  is a generalization of the notion of ordinary absolute value of the field  $\mathbb{C}$  of complex numbers. A real valued function defined on a field  $K$  into non-negative real numbers is called absolute value of  $K$  if  $|x| = 0$ ,  $x = 0$ ;  $|xy| = |x| |y|$  and  $|x + y| \leq |x| + |y|$ ,  $x, y \in K$ . In this thesis, we study absolute values and its basic properties and some significant results like Ostrowski's Theorem, Approximation Theorem and Independence Theorem. We also discuss Archimedean and non-Archimedean absolute values, completion of fields with respect to absolute values. A non-Archimedean absolute value gives rise to what is called (additive) valuation. A detailed exposition of discrete valuations is brought out. We also study Hensel's Lemma and some of its applications.