The prime goal of this thesis is to give a decent introduction to the theory of invariants for finite groups. We begin our characterisation with symmetric polynomials and their fundamental properties. In particular, we study the ring of symmetric polynomials and we prove that it is finitely generated by elementary symmetric functions. Then we deal with some of the criteria for a polynomial to be symmetric.

In the second part, we generalise these ideas for any finite subgroup of GL(n,k). We define an action of a finite linear group on k[x_1,...,x_n] and consider polynomials that are invariant under such action. We show that they form a ring which is always finitely generated, as follows from the Noether's bound theorem.

At the end, we describe the ring of invariants and relations among its generators more profoundly.