In this thesis we will be studying functional encryption for quadratic functions. We want to encrypt a message, in form of a vector, $\mathbf{z}$ to a plaintext ct and create a secret key sk_f for a quadratic function f, which will allow us to decrypt ct to $f(\mathbf{z})$, while the ct and sk_f will not leak any information about $\mathbf{z}$. We will introduce one concrete design. The aim of this thesis will be the preparation of necessary preliminaries, which will allow us to describe the design, and to verify correctness of the algorithms. We will describe *Arithmetic Branching Programs*. Such objects will help us represent function f. Furthermore, we will introduce *Garbling and Partial Garbling schemes*. Those will allow us to "randomize"a part of the algorithm. We will also specify an encryption algorithm for linear transformation and use it to describe the main encryption algorithm for quadratic functions.