**CHOSEN COMPONENTS**

**Smart key:**

- nRF24L01+ RF module: SPI communication, auto acknowlegdenment, controlable transmit power, great range, wide operation voltage, ultra low power down consumption.

- 2 push button: 1 for locating the vehicle (flashing light, horn), 1 for locking the vehicle.

- 1 multicolor LED: indicate state of the vehicle (locked, successfully unlock, unlocked, successfully located).

- 1 CR2450 battery: small battery with great voltage consistency (3V), discharge down to 2V (), high capacity (600mAh)

- Microcontroler ATMEGA328P: SPI communication for RF module, number of pins for input and output (2 inputs for button, 3 outputs for indication led, 6 pins for communicate with RF module), lots of documentations, simple to configure and program, ultra low power consumption, wide operation voltage.

**Smart lock:**

- nRF24L01+ RF module: SPI communication, auto acknowlegdenment, controlable transmit power, great range, wide operation voltage, ultra low power down consumption.

- 1 switch: to power the vehicle

- 1 multicolor LED: indicate state of the vehicle (locked, successfully unlock, unlocked, successfully located).

- 1 locating LED: flashing light if receive a locating command.

- 2 relays: 1 for controlling the power of the vehicle, 1 for controlling the vehicle light system.

- Microcontroler ATMEGA328P: SPI communication for RF module, number of pins for input and output (1 input for switch, 4 outputs for indication led, 6 pins for communicate with RF module, 2 outputs for relays), lots of documentations, simple to configure and program, ultra low power consumption, wide operation voltage.