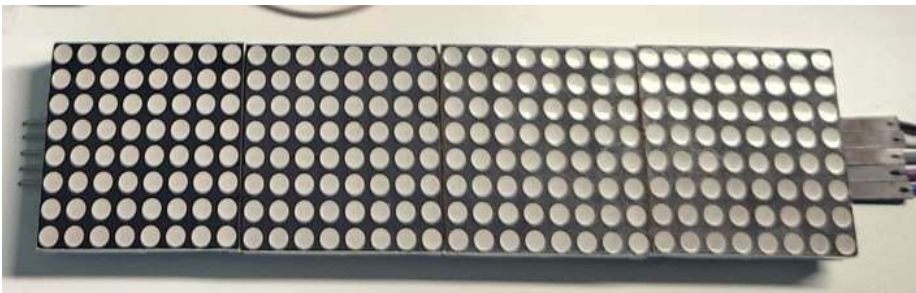


Hardware list: physical components of the project

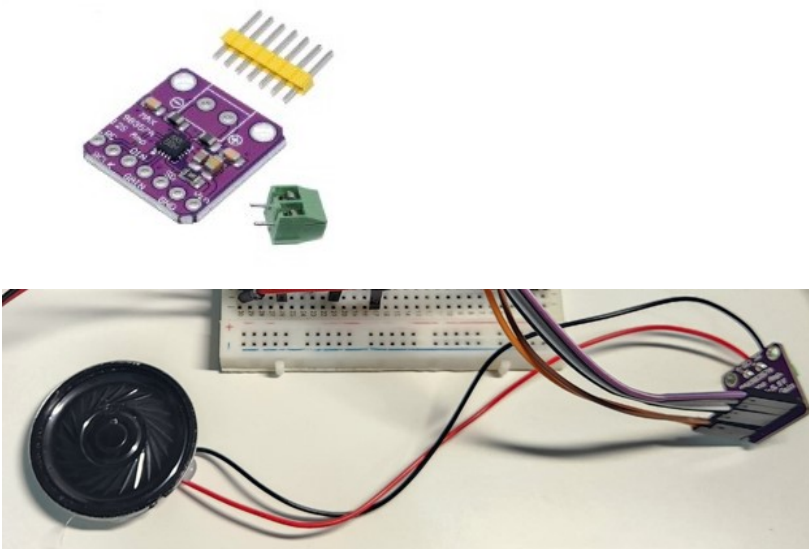
1- ESP32: the micro-controller that runs all the operations



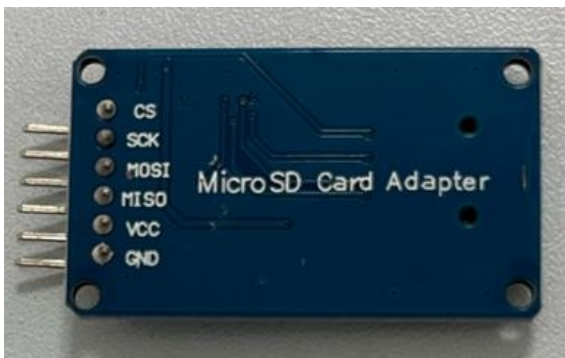
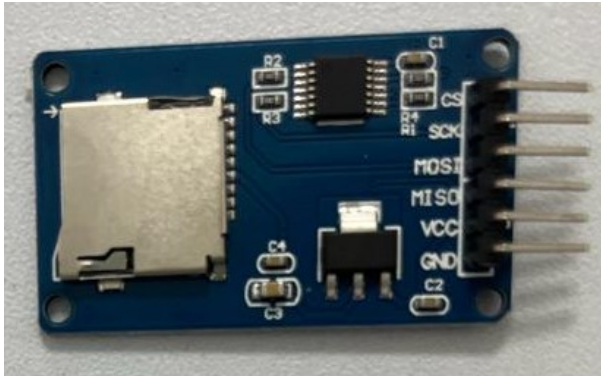
2- MAX7219 Led matrix - 8X32: the LED screen that displays text to the user



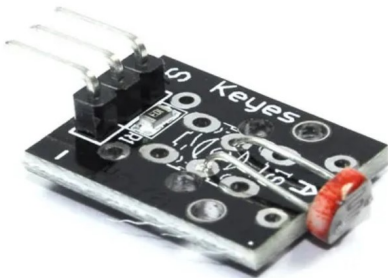
3- max98357 audio amplifier: the chip that plays audio.



4- micro-SD card module: reads sound files from a micro SD



5- photoresistor: a light sensor used to set display brightness based on room luminance



Software list: external libraries used to support the physical component or connect to services

1- ArduinoJson: used to parse strings of json format sent to the clock from firebase

2- ESP32-audioI2S: used to interact with the DAC "max98357"

3- Firebase ESP32 Client: used to make the clock read and write to firebase

4- MD_Parola: used to control the LED display screen "max7219"

5- NTPClient: used to request the current time from the rime server