

ABSTRACT

The master's thesis consists of an introduction, three chapters, a general conclusion, a list of references and appendices. The master's thesis contains: 37 drawings (diagrams, photos, etc.), 37 tables, 17 references and 20 pages of appendices with program code. The total volume of work is 104 pages.

The aim of the thesis is to create a prototype of the microclimate monitoring system and home security system.

The main indicators of microclimate and types of home security systems are analyzed in the thesis. The optimal components of the system and data transmission protocol are selected. Decentralized system architecture, algorithm of system components operation, database scheme and software have been developed.

Keywords: ESP32, MQTT, Python, sensor, microcontroller.