

Abstract

Basic needs and activities are of decisive importance in our daily lives; thus, a variety of different facilities provide a solution to meet the housing, leisure, entertainment, study, and workplace needs of all people. In real-life, it is almost entirely self-evident for most people to be able to maintain the desired environmental conditions, so they are not concerned about the complicated design and coordinated construction that is behind the process.

My thesis describes the concept and objectives of the building automation field and presents its historical development and constantly expanding functionality.

To understand a real-life project, it is necessary to demonstrate the basic concepts of control engineering and mechanical engineering, tools that can be used, and the thought-processes. After providing the preliminary knowledge, a larger part of the independently designed program logic of the building automation system of the New Theoretical Building of the Faculty of Medical School at the University of Pécs will be presented. The thesis also provides an outline of the heat and smoke extraction system which performs lifesaving tasks and is required for the correct operation of the installed equipment.

Detailed knowledge of the tasks and proficiency in the use of monitoring software that visualizes the entire system is needed for accurate operation. The thesis finally covers the main problems that could emerge during installation and their possible solutions.