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| **Author(s) Name:** | Muhibul Haque Bhuyan, Md. Maidul Haque, M. Abdur Rauf, and Md. Mazharul Islam Khan | | |
| **Contact Email(s):** | muhibulhb@aiub.edu | | |
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| **Abstract:** |  |
| Abstract— In this paper, we have designed and implemented a prototype elevator and its control systems using a very low-cost microcontroller (PIC16F84) based circuit. Thus, the conventional analog control circuit has been replaced. The elevator is operated by using DC motors and gears along with a timing belt. The forward and reverse direction of motion of the DC motor is obtained by using a MOSFET bridge. An assembly language program has to be developed for the microcontroller for implementing different logic operations, such as floor selection, sensor signal detection, alarm signal transmission, reception, etc. Different mechanical parts, such as a cabin, doors, gears, guides, timing belts, etc. have also been designed for the prototype system. Before implementation of the system, we simulated the microcontroller-based control circuit using Proteus software. It was found that the simulation results are satisfactory and practical systems work very well. We also expect that this will save our valuable foreign currency if we go for practical implementation. | |