

# **WINDOWS CLEANING DEVICE**

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## **ABSTRACT**

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This project is mainly about design of window cleaning device which can be remotely or automatically controlled. Its aim is to simplify the window cleaning process and increase the safety of window cleaners. Also, another aim of the project is to build this device at low cost for the casement window which is found on normal commercial buildings.

The ideas of design for this window device basically gather from opinions from supervisor, seniors' reference books and reference websites. The designs involve mechanical mechanism and electrical parts. The main mechanical mechanism will be involved the horizontal and vertical movement across the windows. On the other hand, the electronic parts will consist of a few electronic circuits like timers and counters. The electronic parts also used in controlling the operation sequences of this device. This can be done by using a few electronic components called relay which is operated as a switch to control the power source to the device.

As the fabrication of the device is being done, few issues about the electrical circuits were found. The main problem was about the controlling circuit and troubleshooting is carried out with help from my electrical lecturer and my seniors. On the mechanical parts, the process went smoothly in the workshop with help from the lab technicians. The final