



A REPORT SUBMITTED TO THE FACULTY OF MECHANICAL  
ENGINEERING, UNIVERSITY TECHNOLOGY MARA IN PARTIAL OF  
FULFILLMENT FOR THE DIPLOMA IN MECHANICAL ENGINEERING

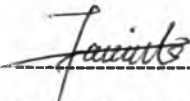
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## 1.1 INTRODUCTIONS

An elevator or a lift is a machine capable of transporting people or goods to certain elevations, upwards or downwards. There are two common types of elevator; passenger and freight lifts. Both are powered by motor and capable pulley system.

Human, animals or water operated ancient elevators. Early elevators were powered by steam engines, which used hoists system or hydraulic pressure to force the elevator up. Due to safety reason, the lifts were used to carry goods only for fear they might collapse. Modern elevators are reliable and efficient. They are fully automated and can travels to the top floors of skyscraper and high-rise buildings.

Technology elevators have changed our lifestyle and architectural works. Before the elevator, few buildings were greater than four storeys high, with the elevator only the sky is the limit.

In our project, we choose to study an elevator or lift system. In the modern sense an elevator or a lift mode of transportation to lift people or goods vertically. There are two classes of elevator, traction elevator and hydraulic elevator. In our project, we choose traction elevator can be based for high-rise building and can achieve high. The hydraulic elevator is limited for two to six storeys high only.

## 1.2 HISTORY OF THE ELEVATOR

From ancient times through the Middle Ages, and into the 13<sup>th</sup> century, man or animal power was the driving force behind hoisting devices. By 1850 steam and hydraulic elevator had been introduced. In 1852, world's first safety elevator who invented by **Elisha Graves Otis**. The first passenger elevator was installed by Otis in New York in 1857. After Otis death in 1861, his sons, Charles and Norton, built on