they were hand cranked.A general hand cranked motor is shown in Fig. \[fig:manual\] and the gear box is commonly used in various automobiles and other electrical appliances. The operator would have to place the key in the ignition switch and then turn the key several times to select the desired speed, then twist the key a further several times to set the desired direction of rotation and finally, wait until the motor stops. This may be done several times to reach the desired speed and direction of rotation of the motor. ![A manual motor. []{data-label="fig:manual"}](manual.jpg) However, using this method requires the operator to perform several time-consuming and awkward actions. In recent years, electric motors have been made more efficient and convenient to use. Power steering and electrical window controls are some of the results of these developments. However, the drawback of these improvements is the increase in the cost of the vehicle, thus it is not suitable for low income people who cannot afford these improvements. Moreover, other problems such as pollution are not addressed by the increased efficiency. This problem is the major problem of manual control. In addition to this, in high power vehicles, the motor can create too much heat. 1.3 AUTOMATION METHODS As described above, humans perform many actions for performing the tasks of motors. To minimize human errors in operating these motors, robots are used. In the 1960s, robot was invented. In 1970, there was a notable work on the development of this kind of robot. This work is known as the robot arm or the automatic arm, or, when the robot is also equipped with a camera, the *telerobot*. [@robotic_handbook] [@taylor_hand]This form of robot arm has been used for manufacturing, repair, and assembly of mechanical parts in many factories. Today, this technology is widely used for many other tasks. For example, this technology is used in many ATMs to dispense money or check balances. This kind of robot arm also has several problems such as the mechanical difficulty of moving the arm. These problems were solved by the use of a robot arm with pneumatic control. Although the pneumatic robot arm has some advantages over the robot arm with mechanical control, it has several disadvantages such as cost of maintenance and control. This method requires a system that uses several types of devices for control and monitoring. For example, this 82157476af