CHAPTER 1

INTRODUCTION

1.1.1 OVERVIEW

RC car is car powered by battery or gas that can be controlled from a certain distance by using a specialized device such as RF transmitter, Bluetooth, or remote. The meaning of “RC” is to mean both “remote controlled” and “radio controlled”. Remote controller is the vehicle that connected to their remote by wire while the radio controlled is the vehicle operate by using wave frequency at certain frequencies. It has a transmitter for transmitted data from remote control and the data will collect by the receiver in the car. RC car has 7 control movement functions; forward, left forward, right forward, backward, right backward, left backward, and stop.

Android is an operating system that is used in smartphone like Samsung, Lenovo, and others. This operating system is developed by Google based on Linux kernel source and it's designed to enable the user to touch, tap, swipe, and pinching to control the interface function of the phone.
1.1.2 PROJECT BACKGROUND

This project is to build a car that has a differential drive, multiple level of speed, control arm and gripper and also will be controlled by using a Bluetooth device that connected to the android phone. This car will use one DC motor and three servo motors. DC motor used to move the car forward and backward while the first servo motor is used to control the front tire to move left and right, second servo is to control the movement of the arm up and down and the last servo is to control the gripper. The command to control the movement of the car will send from the android device that connected to the car by Bluetooth.

This has been the new way to of controlling the RC car by using Bluetooth. Almost all devices nowadays has built in Bluetooth functionality such as smartphone, tablet, and laptop. The rapidly increasing number of smartphone user has made the Android operating become top of the chart of number user in the operating system. This new way that was controlled RC car using the Bluetooth system has a lot benefit because it's free and easily can be developed by using different kind of software.
FIGURE 1.1: Android operating system.

Source: www.android.com

FIGURE 1.2: RoboRemo software

Source: http://www.roboremo.com