CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Controller Area Network (CAN) was initially created by German automotive system supplier Robert Bosch in the mid-1980s for automotive applications as a method for enabling robust serial communication. Thereafter, CAN was standardized as ISO-11898 and ISO-11519, establishing itself as the standard protocol for in-vehicle networking in the auto industry. By networking the electronics in vehicles with CAN, however, they could be controlled from a central point. By this it could increase the functionality, add modularity, and makes diagnostic process more efficient. CAN bus can transfer the serial data one by one. CAN bus subsystems are accessible via the control unit on the standard termination, split termination, biased split termination. This project involves the implementation of Arduino board and sensor on CAN protocol. The sensor and hardware must follow or compatible with CAN protocol after integrating both software and hardware.

1.2 PROBLEM STATEMENT

Temperature is one of the very important parameters that need be monitored before unnecessary event occurs. Therefore there is a need to design temperature control system to avoid unnecessary event to occur.
1.3 PROJECT OBJECTIVES

The main objective is to design and build the temperature control system that will:

(i) Display the current temperature.
(ii) Control the temperature to be at the desired temperature.

1.4 SCOPE OF THE PROJECT

This project is focused on the design of the water temperature monitoring and control system. The scope of the project are:

(i) To design and fabricate the temperature monitoring and control system using Arduino microcontroller as main controller.
(ii) Software development on Arduino microcontroller and sensor using CAN Bus.