**Project Proposal - Low power temperature logger**

Name (Index Number)

Date

# Introduction

Data logger is a device which can store some data. The objective of this project is to develop a low power consumption temperature logging system for outdoor temperature monitoring which is especially useful for field experiments.

# Targets

The main requirements of this projects are;

* + Measuring temperature in four different points with 5 *◦*C accuracy
  + Ability to store data captured by sensors with time stamp for two days
  + Capability of operating with batteries in field experiments
  + Ability to monitor battery level and shut down when necessary

# Methodology

DS 18S20 temperature sensor will be used as the sensor to monitor the temperature since it does not affect due to the battery draining. Secure Digital (SD) card will be used as the storage medium and data will be written in FAT32 format, so, the card can be directly read from the computer. ATmega 8 microcontroller running at 1 MHz internal oscillator will be used as the main control circuitry. A real time clock with a battery backup will be used for generating time stamp. Several switches together with some LEDs will be interfaced to provide user with more functionalities such as battery level monitoring. USART will be used to allow user to interact with the firmware to change certain settings such as system time.

[Your proposal must be longer than the above example. It should include a clear introduction, giving the background and justification of the work you are going to do. Under methodology you should describe your design in detail using suitable block diagrams, circuit diagrams flow charts etc as necessary. However, the proposal should not exceed 2 pages.]