Automobile Temperature Monitor

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1 About the Temperature Monitoring System

1.1 Description

Tracking is one of the fundamental matters of our task. on this generation, it's miles used to determine the presence of the passenger and if the passenger exists then our device starts off evolved the functionality. So these days the whole lot is becoming computerized and everyone is seeking out new merchandise to make life less difficult. In our mission, the precept goal is to format and expand a device that is capable of tracking the passenger's existence and warmth monitoring and displaying

1.2 Features

It’s able to figuring out climate the consumer is exist or now no longer with inside the automobile.

If passenger turned into existed with inside the automobile it's going to offers the indication.

After the indication it's going to decide the heat.

Driver and the passenger could have the get entry to to changing the temperature with inside the automobile.

The passenger can alternate the temperature via way of means of looking the show because the show is given with inside the system

1.3 S.W.O.T Analysis

Strengths

Easy to adjust the temperature

value. The machine is robust.

Low cost.

Modular Based

Programs. User

Friendly.

Weakness

It's handiest beneficial for the international locations which might be having low temperature.

Opportunities

It can be practiced by replacing heater by air conditioners so that it will be useful in all the countries

Threats Not suitable for average or high temperature

environment.

5Ws And 1H

WHAT : Temperature Monitoring System

WHERE : Used in Automotive Industries

WHEN : At low Temperature

WHY: For temperature monitoring and adjusting the temperature effectively.

WHO: Anyone with Car .

2 Requirements

2.1 High Level Requirements

High Level Requirements:

ID	Description
HR01	Tempreature Sensor
HR02	Switches
HR03	Heat Generation
HR04	Atmega-328
HR05	Display
HR06	Software used

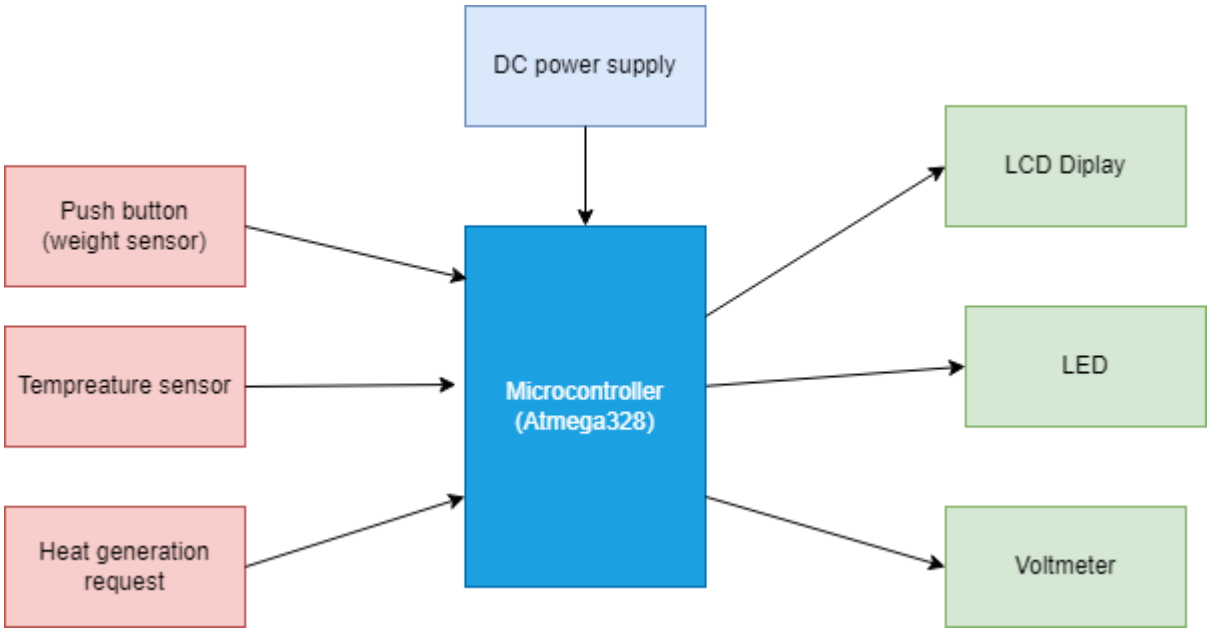
2.2 Low Level Requirements

Low Level Requirements:

ID	Description
LL01	Thermoelectric module
LL02	Switches
LL03	ADC and PWM
LL04	LM35 and ADC
LL05	Atmega-328

3 Block Diagram and Blocks explination

3.1 BLOCK DIAGRAM



3.2 SENSORS

- **Temperature Sensor (Thermistor)**

Thermistors are a very accurate and cost- effective sensor for measuring temperature.it is the NTC thermistor that is commonly used to measure temperature

Resistance produces change in voltage, this voltage is taken as input to micro controller.

3.3 ACTUATORS

- **LCD Display:**

Displays each and every value we enter in our keypad along with Temperature.

- **LED:**

A light-emitting diode is a semiconductor light source that emits light when current flows through i

3.4 MICRO CONTROLLER

An integrated circuit that contains a microprocessor along with memory and associated circuits and that controls the whole system. Power Supply

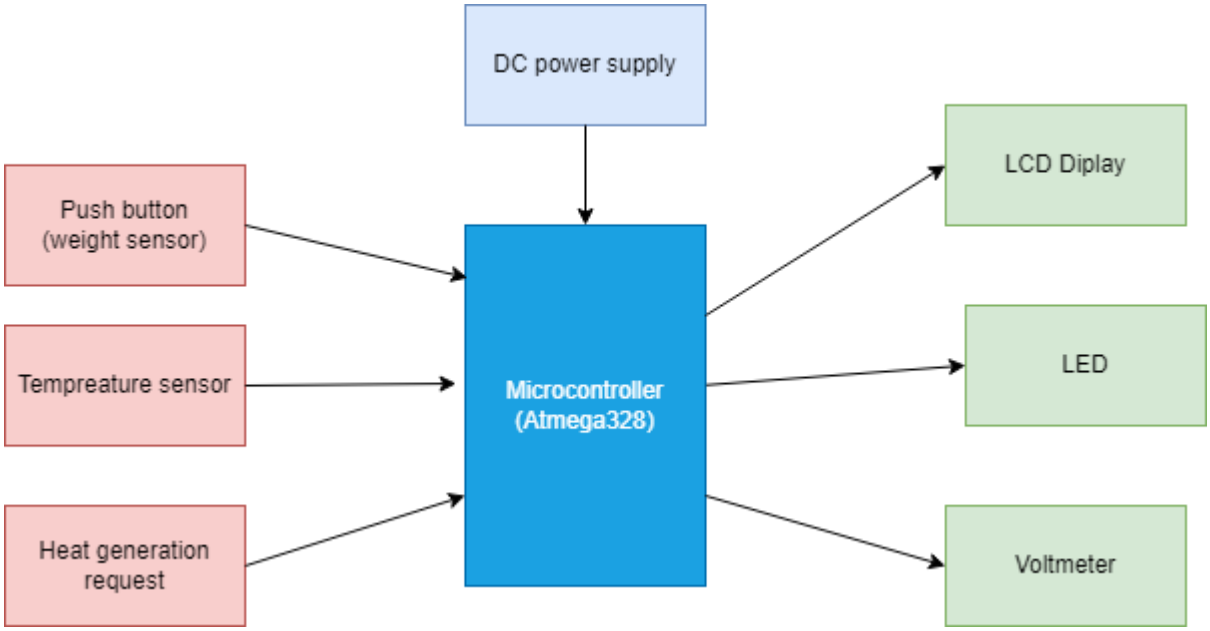
The DC Power supply powers Microcontroller and other components in the system. Here I am using 5V Dc supply to power the circuit.

3.5 Push Button Switch

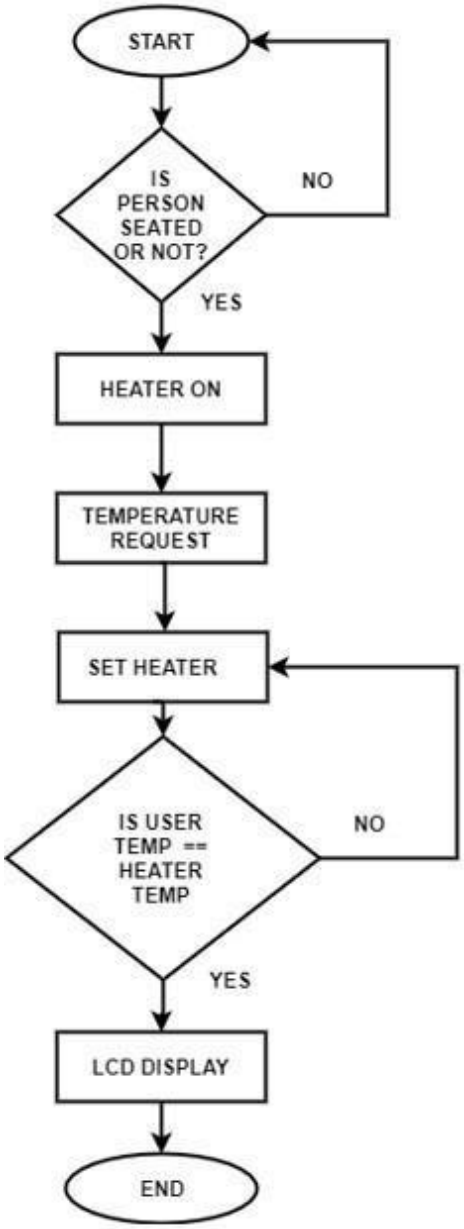
Push button switch is connected to the microcontroller through a switch in order to limit the flowing current.

4 Architecture

- **4.1 Block Diagram**



4.1.1 Flow Chart



5 Test plan and output

5.1 HIGH LEVEL TEST PLAN

Test Plan

Test ID	Description	Input	Output	Result
To1	Person seating	button =1	button=1	PASS
To2	No person	button=0	button=0	PASS
To3	Tempreature request=0	Temp=0	heater=OFF	PASS
To4	Tempreature request	Temp=10	heater=10 degree	PASS
To5	Tempreature request	Temp=15	heater=15 degree	PASS
To6	Led ON	Button=1	Led=ON	Pass
To6	Led OFF	Button=0	Led=OFF	Pass
To7	LCD ON	Button=1	LCD ON	PASS

6 Application

- It’s able to figuring out climate the consumer is exist or now no longer with inside the automobile.
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Simulation Diagram: