Assignment 1.

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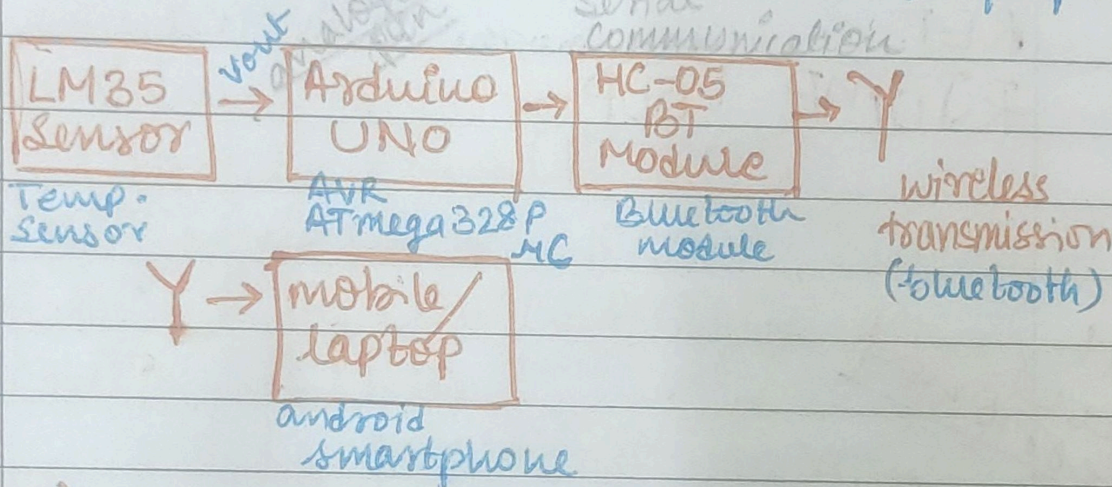
Q. Block diagram for Temperature data from temperature sensor to mobile/laptop.



(LM35 sensor)

Temperature Sensor:

They are precision Integrated Circuit (IC) whoes o/p voltage is proportional to °C temp. It doesn't require any external calibration to get ±0.25°C accuracy at RT (room temp) and ±0.75°C over a full -55° to +150°C temp. range.

Scale factor → 10mV/°C

O/p ~ Voltage

I/p ~ temp sensored

AVR Atmega328P µC.
(micro controller)

Arduino UNO:

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- has 6 analogue i/p. pins
- 14 digital i/p-output pins.
- MCU has 32kB ISP flash memory
- 2kB RAM.
- 1kB EEPROM.
- clock frequency ⇒ 16MHz.

I/p ↦ voltage with analogue pins.
O/p ↦ digital o/p

HC-05 BT Module: Serial Port Protocal (SPP) module,

- Bluetooth V2.0 + EDR (enhanced data rate) 3Mbps modulation
- 2.4GHz radio transceiver & baseband CMOS technology

Android Software: Temp. monitoring app

- data sent by HC-05 Bluetooth is received and displayed on app.
- via serial communication