TASK 1:

DESIGNING A SMART ENVIRONMENTAL MONITORING SYSTEM

COMPONENTS USED	FUNCTION	TYPE OF COMMUNICATION INTERFACE	COST
ARDUINO UNO	MICROCONTROLLER BOARD	SUPPORTS DIGITAL & ANALOG , UART,SPI,I2C COMMUNICATIONS	RS 800
DHT11–Temperature and Humidity Sensor	MEASURES TEMPERATURE &AND HUMIDITY	SINGLE WIRE DIGITAL COMMUNICATION	RS 105
MQ-135 Gas sensor	USED FOR AIR QUALITY MONITORING	ANALOG COMMUNICATION	RS 100
Photoresistor/LDR	MEASURES LIGHT INTENSITY	ANALOG COMMUNICATION	RS 35

YL-83 Rain detector sensor	RAIN DETECTION	ANALOG & DIGITAL COMMUNICATION	RS 85
BMP180	MEASURES ATMOSPHERIC PRESSURE	I2C COMMUNICATION	RS 35
OLED Display (128X64 PIXEL)	DISPLAYS SENSOR DATA LOCALLY	I2C COMMUNICATION	RS 360

POWER SUPPLY REQUIREMENTS:

EXTERNAL POWER SUPPLY TO ARDUINO UNO BOARD : 9V-12V

ALL SENSORS OPERATE AROUND: 3.3V-5V

ADDITIONALLY BREADBOARD AND JUMPER WIRES ARE REQUIRED

ALTERNATELY WE CAN USE ESP8266/ESP32 IN CASE WE WANNA DISPLAY THE DATA OVER A WEBPAGE.