PRESENTATION - 1

ELECTRONIQUE & SIGNAL
WEEK2-First presentation
05/10/2023

G1
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Petal Ketul
GUO Xiaofan
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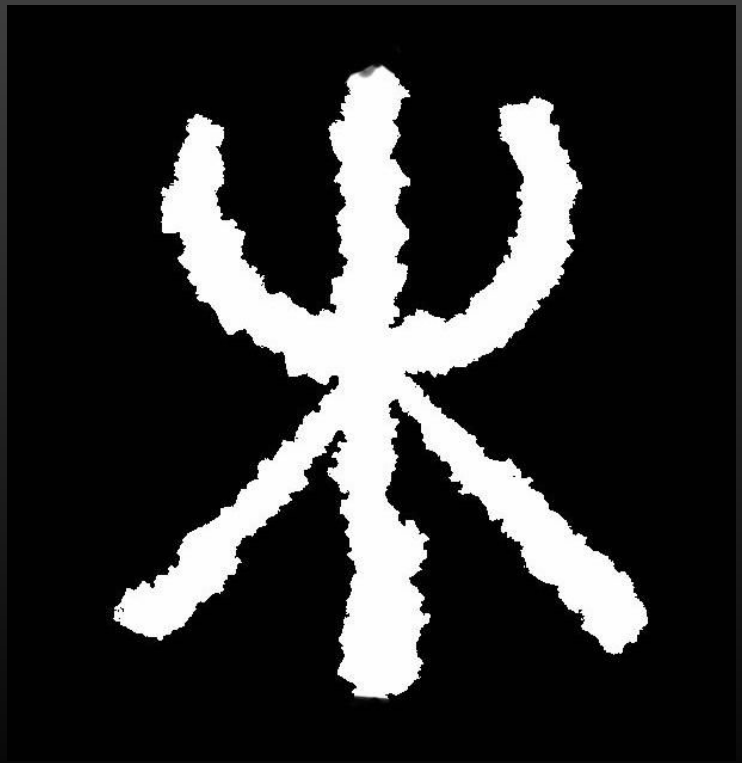
Summary

1. Introduction
2. Project Bcakground
3. Project Implementation
4. Tools and Applications
5. Conclusion

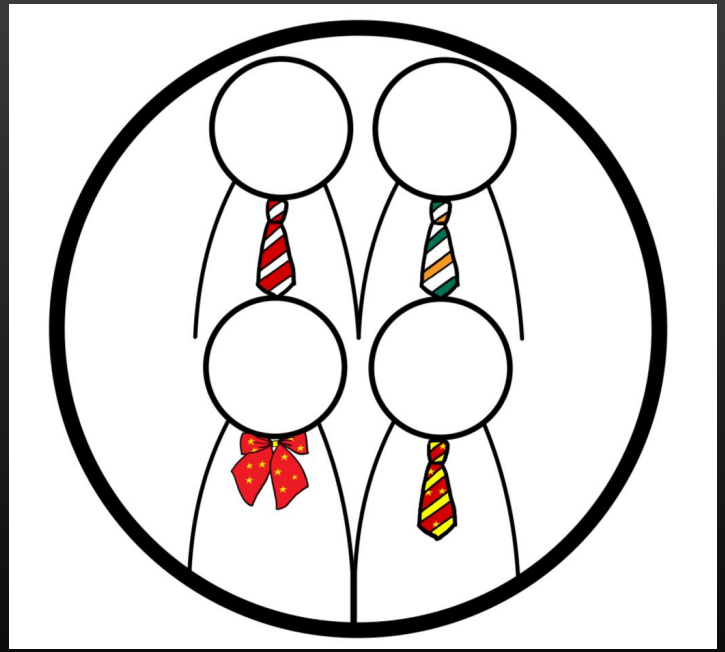
Introduction

UKXY

U - Umut
K - Ketul
X - Xiaofan
Y - Yang



Introduction



Turkey

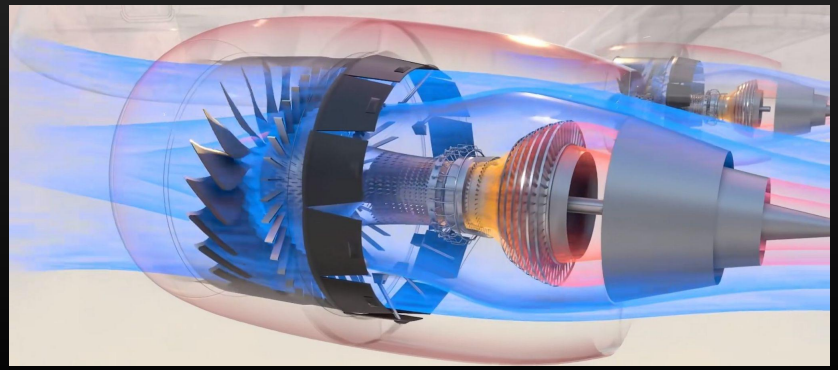
India

China

Project Background

Crowded Seats

Noisy



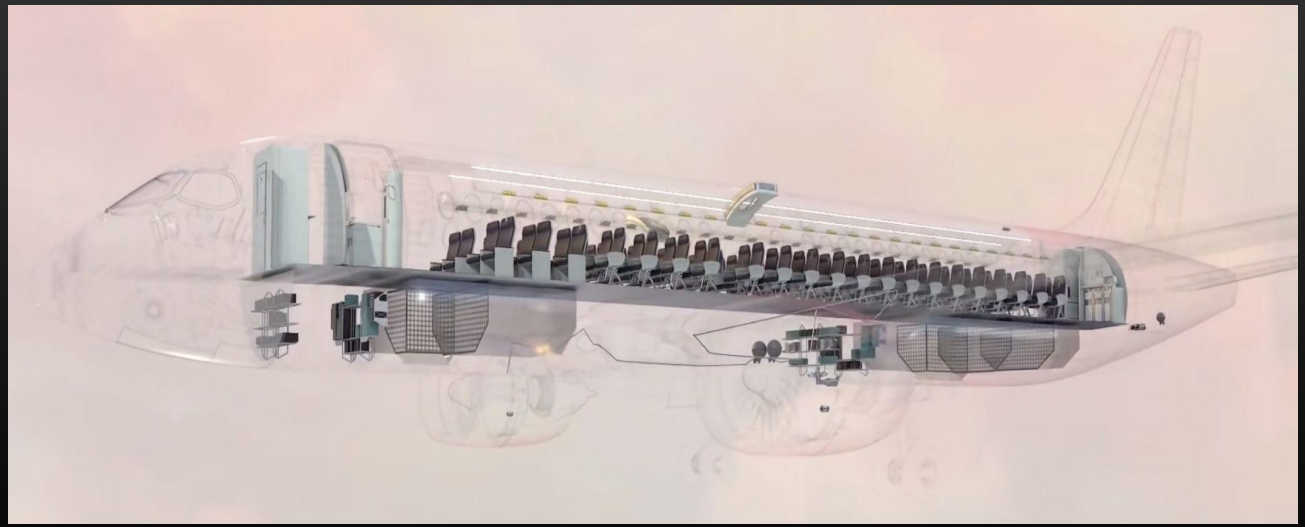
Project Background

Environment Control

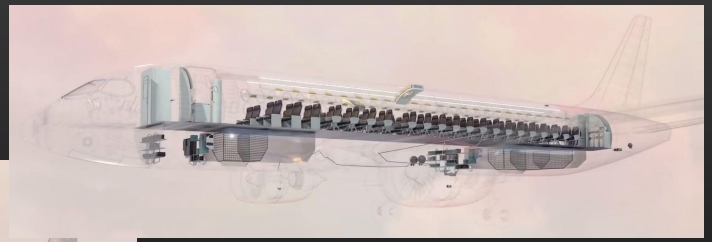
Air Quality

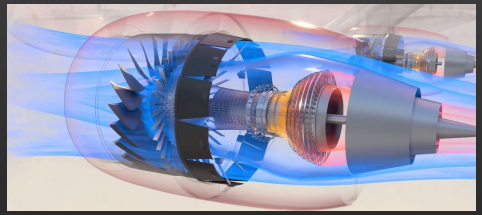
Temperature

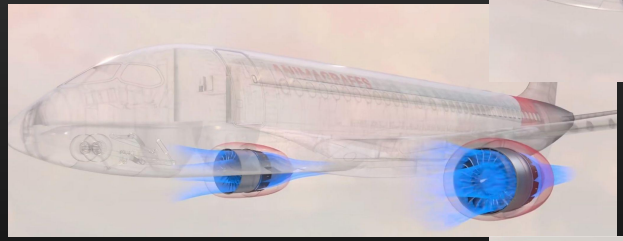
Noise

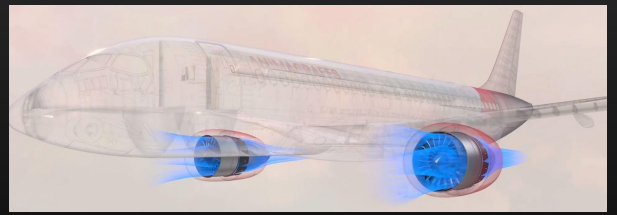


Project Introduciton - User Case

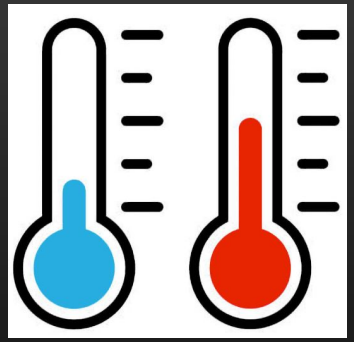




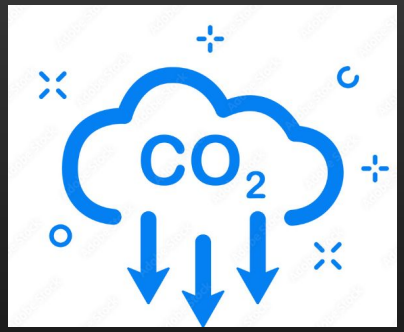




Project Implementation



Temperature



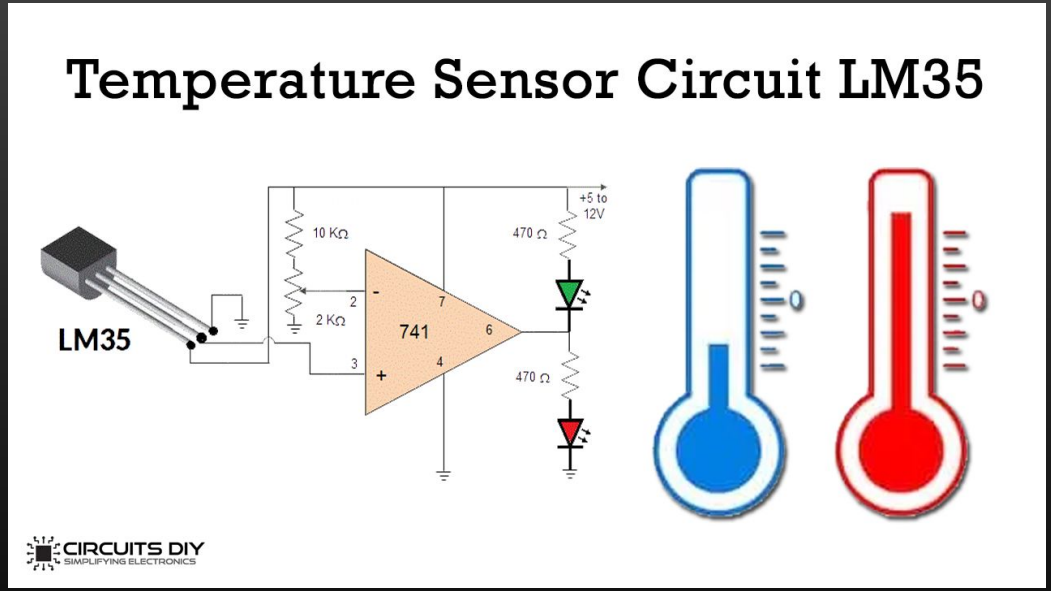
CO2

Sound

Project Implementation

Singal Processing Flow :

- we measure inside cabin temperature with help of LM35 sensor and send to the microcontroller.
- that signal will be compare with the reference or the set temperature.
- as a result air conditioner will adjust according to the set temperature.



Project Implementation

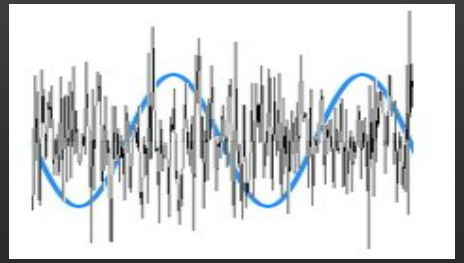
Singal Processing Flow :

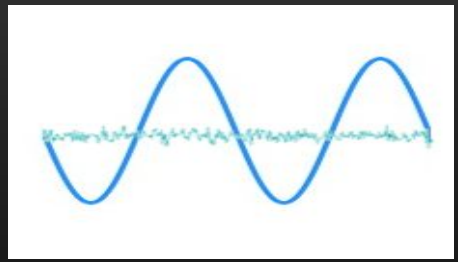
- we can measure the CO2 level inside the cabin by the help of SKU_SEN0159.
- then the sensor collect the data and send to the microcontroller.
- microcontroller will give command to increase or decrease air quality to the air purifying system.

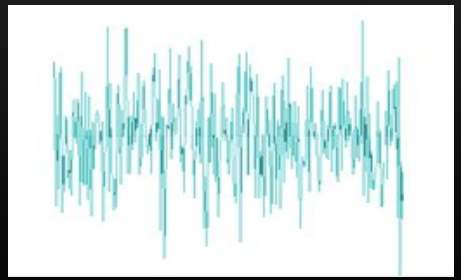
Project Implementation

Singal Processing Flow :

- We can measure sound by microphone and identify the continuous signal cycle by the calculation.
- In this calculation we measure the amplitude, width, magnitude and frequency of the signal.
- Because vocal and music noise is not continuous signal cycle.

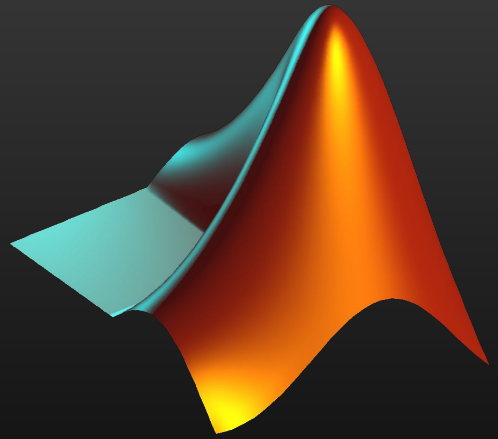






Tools & Applications

OS

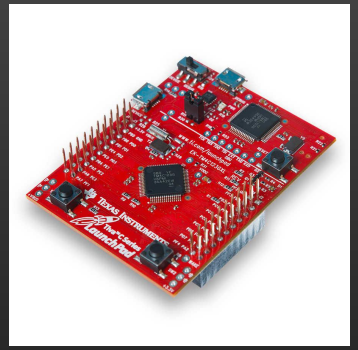


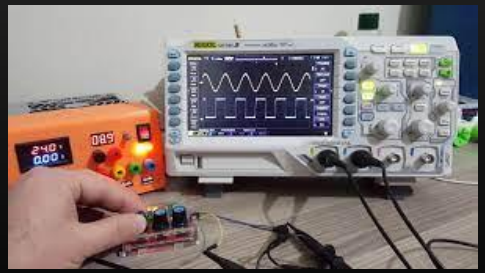
MATLAB

TIVA

Tools & Applications
— Electronics

- Single Board Controllers
- Sensors
- Measuring devices
- Softwares

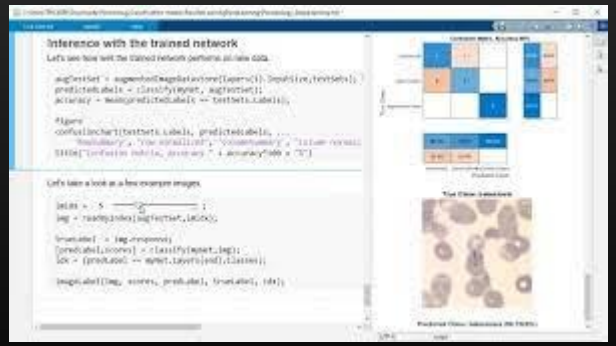




Tools & Applications

— Singal Processing

- Software



Conclusion - Schedule

WORKWEEK	START DATE	OBJECTIVES	RESULTS
PREPARATION :1 WEEK			
1	27/09/2023	* Determine group information	
		* Subject discovery	
DESIGN OF SYSTEM SCHEME :1 WEEK			
2	04/10/2023	* Hardware preparation	Prepare a report: 2 pages
		* Learn about TIVA	Presentation: 05/10/2023
SENSOR CONNEXION : 3 WEEKS			
3	11/10/2023	* The temperature sensor	
4	18/10/2023	* The microelectret sensor	
5	25/10/2023	* The sound sensors	
		* Programming	
		* Testing bluetooth connectivity	Prepare a report
SOUND ANALYSIS : 6 WEEKS			
6	08/11/2023	* Improvement of previous functions	
7	15/11/2023	* Explain in-depth the signal analysis	
8	22/11/2023	* Implement algorithm in C language	
9	29/11/2023	* Use TIVA microcontroller board	
10	06/12/2023	* Achievement of displaying the sound quality	
11	13/12/2023	* Implementation of noise level detection	
FINAL PROGRAMMING : 2 WEEKS			
12	20/12/2023	* Implementation of phone repair parameters	
13	10/01/2024	* Enabling anti-piracy	Final document
DEFENSE PREPARATION :1 WEEK			
14	17/01/2024	* Generalized results	Final presentation: 24/01/2024