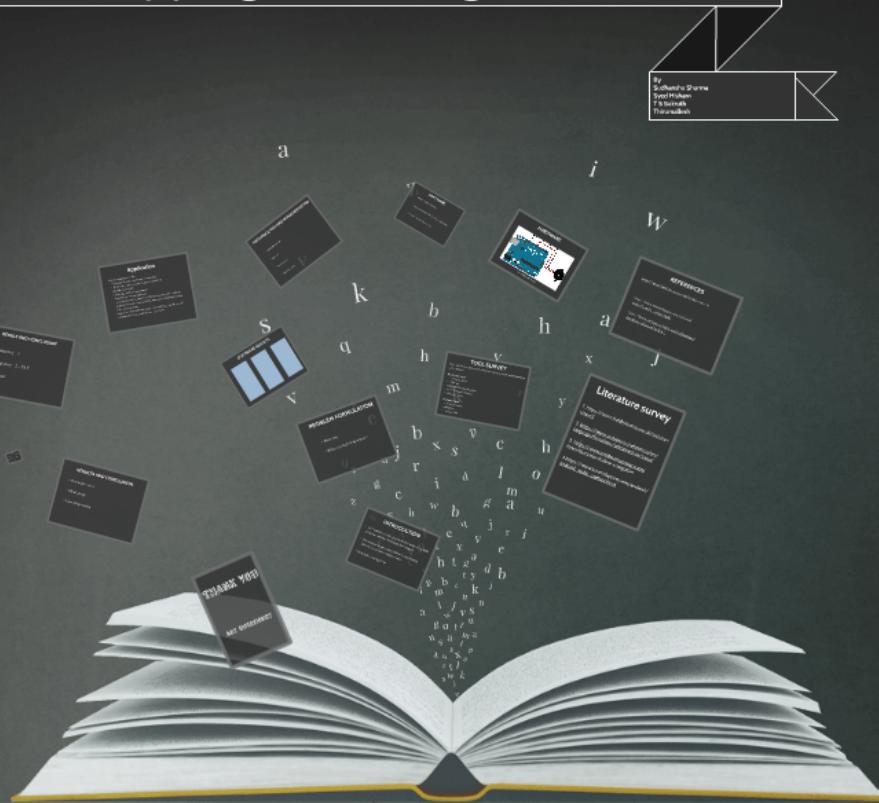


Indoor Mapping And Navigation

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INTRODUCTION

- GPS and the existing platforms that work along with it are not capable of meeting this demand.
- We attempt to solve this problem by generating different frequencies using a source.
- Why Indoor navigation?

Literature survey

1. <https://www.hobbytronics.co.uk/arduino-uno-r3>
2. <https://www.arduino.cc/reference/en/language/functions/advanced-io/tone/>
3. <https://www.smithsonianmag.com/innovation/rise-indoor-navigation>
4. https://www.tutorialspoint.com/android/android_audio_capture.html

PROBLEM FORMULATION

- Main aim.
- Why only high frequencies ?

TOOL SURVEY

The following hardware and software is required for the implementation of this project:

Hardware used

- > Arduino UNO
- > Tweeter
- > Mobile Phone as Receiver
- >9-12V AC-DC Adaptor
- >Jumper Cables

Software used

- > Android Studio
- >MultiSim
- >Arduino IDE



METHODOLOGY AND IMPLEMENTATION

- Transmitter circuit
- Receiver
- Why tweeter ?
- How it works ?



HARDWARE

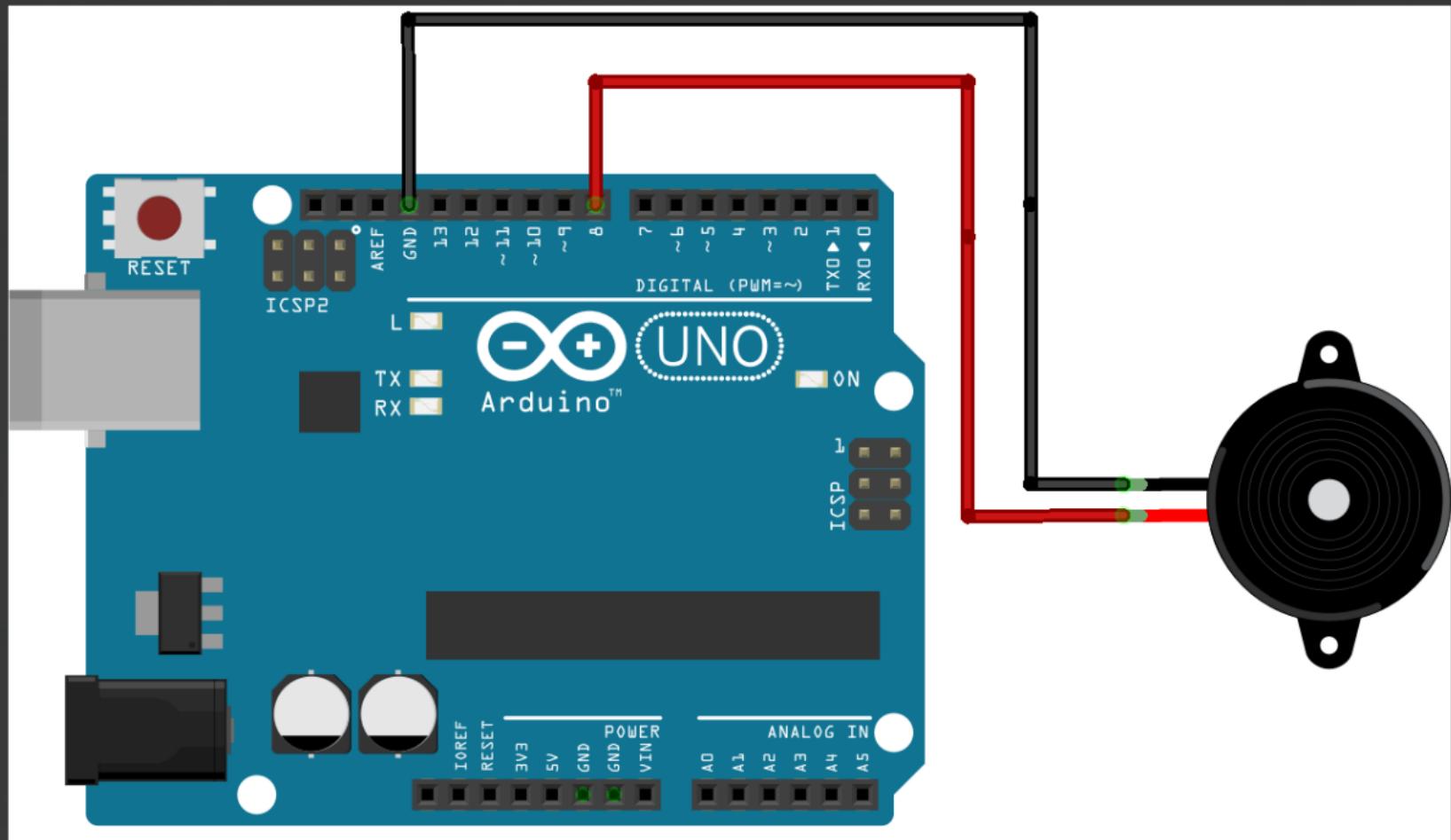


Fig : Arduino with tweeter

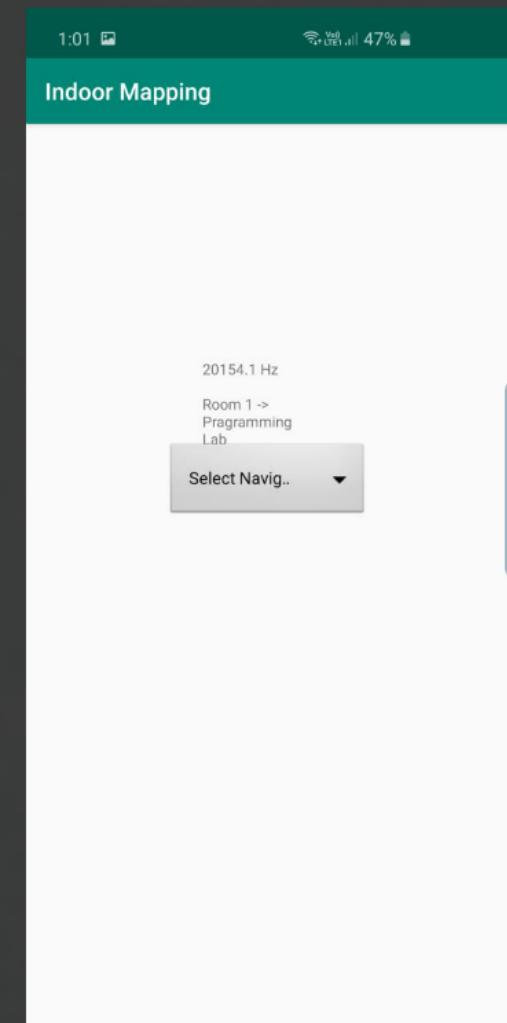
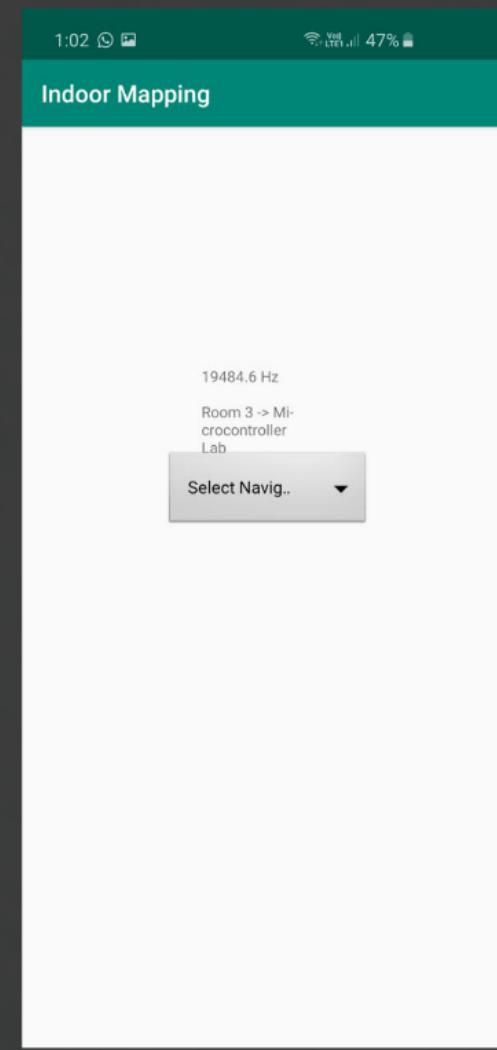
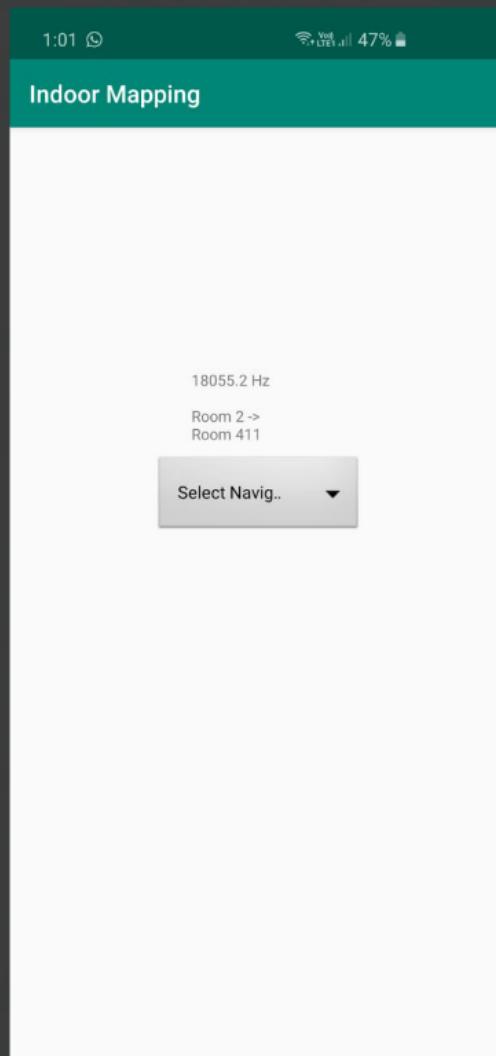
SOFTWARE

- What is Android Studio ?
- How we built Mobile Receiving Application?
- Features and potential of App

RESULT AND CONCLUSION

- Frequency - 1
- Frequency - 2 - VLF
- Internet

SOFTWARE RESULTS



RESULTS AND CONCLUSION

- Potential - voice
- Blind people
- Cost of operation

Application

Indoor mapping of malls :

- Provides a better experience for shoppers
- Builds sales and increases shopper satisfaction
- Builds related sales
- Optimizes facility management
- Enhances safety management
- A university which may have different buildings for different departments and mapping of that building to highlight various labs and classrooms
- Airports to find different shops and boarding gates which will eliminate the directional boards found there

FUTURE SCOPE

- Serves as the foundation for geo-targeted mobile ads and analytics
- Readies malls for upcoming advancements in technology
- Using SLAM concept - mapping



REFERENCES

<https://www.hobbytronics.co.uk/arduino-uno-r3>

[https://www.tutorialspoint.com/android/
android_audio_capture.html](https://www.tutorialspoint.com/android/android_audio_capture.html)

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THANK YOU

ANY QUESTIONS?