

ADVANCED MECHATRONICS (ROB-GY 6103)

PROJECT PROPOSAL- Project 2

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PROJECT DESCRIPTION:

Our project idea is an interactive music system to enable music recording note-wise and performing playback. This project helps us learn the basics of music through keynotes. This would be perfect for those new to music or seeking a fun hobby. The visual representation of notes key-wise and note-wise helps them learn in a better manner. Users interact with the system via push buttons designed as keys, where each key corresponds to a musical note stored in memory. The LEDs under each key, provide visual feedback when pressing a key which enables visual learning. Additionally, a record feature allows users to record, allowing users to capture record, and play for instructed learning.

WORKING PATTERNS:

- Upon switching on, the system acts like a normal keyboard allowing users to play with each key lighting up.
- A record button, upon selecting, starts recording the following notes played using the keys along with the length of time of each note approximating it to a whole/half/quarter/semi-quarter note.
- The recording stops when the record button is selected again.
- Upon selecting the play button, the recorded sequence is played with each key of the note lighting up and displaying the corresponding note using the 7-segment display.
- A delete button can be used to delete the recording to start fresh.