

# ABC Player - Group 1

## Our Group:

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## Objective

We wanted to create an ABC-player where we could write in musical notations in the terminal. The notes we wanted to play is as follows: - Lower Octave: a, b, c, d, e, f, g, h - Higher Octave: A, B, C, D, E, F, G, H

The Enter-key is to be used for as the trigger for playing the notes that has been entered up until the Enter-key is read from memory.

## Components and Division Of Labor

To create this functionality we figured we needed several components for our project that we divided between our group members: - UART with Baud Rate Generator (Ole) - RAM with an Address Counter (Hannes) - Code converter (Oscar) - Mod-m counter (Aditi) - Flip Flop (Aditi) - Timer (Oscar) - Control Path (Shahin and Christopher) - Top module(Aditi)

## Diagrams

We created diagrams before we started to implement the components:

1. FSM Chart (Aditi)
2. ASMD Chart (Shahin and Christopher)

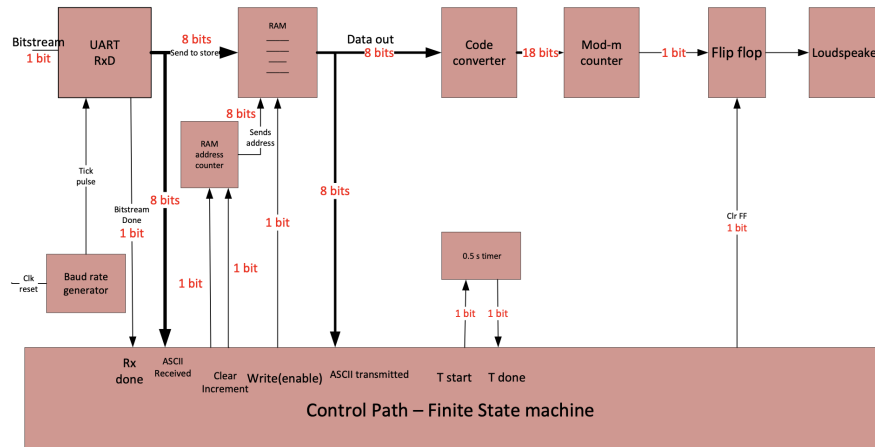
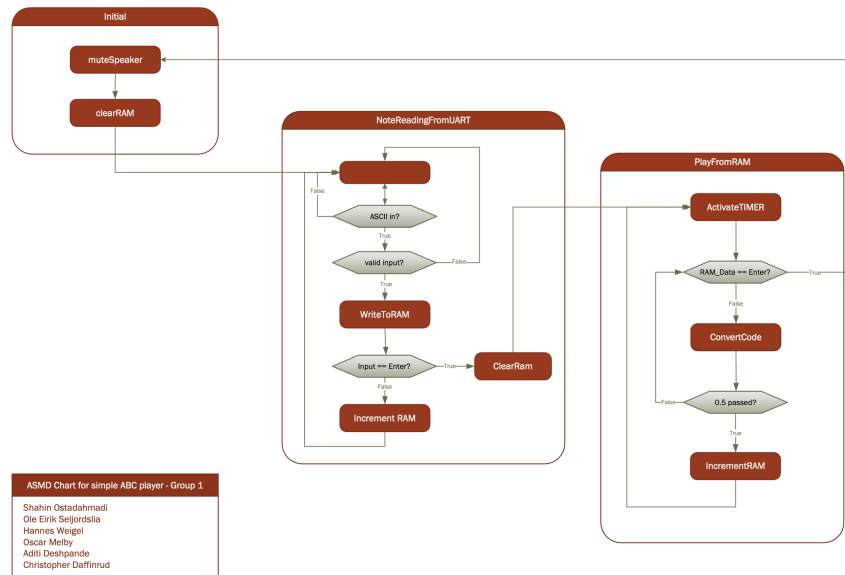


Figure 1: FSMD Chart



These were created and used as a blueprint for trying to make sure that we all were on the same logical track.

## Result

The result was not what we expected. If one observes the simulation file, we send asccii codes but they never become square wave outputs. This is most probably because the ram is not storing the data until enter is pressed, it

[illegible]