**OFF stage implementation**

I decided to switch to the JK Flip Flop instead of D-Flip Flop because the JK Flip Flop has the toggle mode, which means that it will allow me to change from PLAY stage to PAUSE stage within a button (or vice versa). The system will always enter to the PAUSE stage whenever the ON/OFF indicator is activated, and all LEDs will turn off if the music player is in OFF mode. The figure 1 below indicate the idea of our implementation and a timing diagram proving that the music player always enters PAUSE stage whenever I power on the music player.

Diagram, schematic

Description automatically generated

*Figure 1. On/Off implementation*

*(Screen captured from my Mac on October 22nd, 2022)*

Table

Description automatically generated

*Figure 2. When the music player turns on, the system will be always at PAUSE stage*

*(Screen captured from my Mac on October 22nd, 2022)*