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Multimedia Design Project Interim Report

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1. Introduction

During this period of the project, the main menu, image gallery and the audio integration were all completed. The information required to be demonstrated and which was completed during this period is posted here.

1. Project Information

The main menu was completed by creating multiple versions of the screen. When the main menu is accessed, the cursor is defaulted to the image gallery option. From there, the user can input down on the joystick to enter the next screen, which appears identical to the previous one, with the only exception being that the cursor is now set to the next lower option, that being the audio player. From this screen, if up direction is pressed, the screen with the cursor on the image gallery option will be selected, and if the joystick is pressed down, the screen where the cursor is set to game will be displayed. It also has the option to scroll through all the options, meaning that if you are on the game option, and down is pressed, the cursor will instead re-appear at the top on the image gallery option, and the opposite is true as well. If the user has the cursor on the image gallery option and presses up, they can go directly to the screen where the cursor points to the game option. At any of these options, if the user presses the joystick, they will select that option and be brought to that screen.

If the image gallery option is selected, a screen will pop up with instructions on how the gallery works. From there, the first image will pop up. Now, the users have the option to either move to the next image by pressing right on the joystick, left or up on the joystick to go back to the main menu. For subsequent images that are not the first or last ones; right on the joystick will take users to the next image, while left will move them to the previous one, while up will take them to the main menu still. For the last image in the gallery, left will bring up the previous image, while up or right will bring the user back to the main menu.

If the audio player option is selected, a new screen will pop up, and the USB audio will be enabled in a similar fashion, with the use of the provided example code as a base. A small message or something of the sort may appear on screen to let users know that the audio is ready to play. Users are then able to play audio from the computer. If time permits, a bar could be placed on the LCD as well, which will grow and shrink based on the volume of the audio playing, by using the potentiometer ADC readings. If the user presses left on the joystick, the USB audio will turn off, and the main menu will pop up.

When the game option is selected, a new screen will appear with instructions. Then if they select left, they will return to the main menu. If instead, they press select on the joystick they will be entered into the game. Once the game is completed, a results screen will appear, and users will have the option to play once again by pressing select on the joystick or they will be able to press left on the joystick to return to the main menu.

All this information is condensed in the following flowchart:

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Figure 1. Flowchart and block diagram of project

REFERENCES

[1] <https://www.ecb.torontomu.ca/%7Ecourses/coe718/labs/Media-Center.pdf>

[2] Previous lab files

[3] Provided USB audio example files