Toronto Metropolitan University

Department of Electrical,
Computer, & Biomedical Engineering
Faculty of Engineering
& Architectural Science

Course Title:	Embedded Systems Design
Course Number:	COE 718
Semester/Year (e.g.F2016)	F2023

Instructor:	Dr. Gul Khan

Assignment/Lab Number:	
Assignment/Lab Title:	Project Summary

Submission Date:	
Due Date:	

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The final project described in this document involves creating a multimedia center using the MCB1700 board, uVision, and various programming concepts. The multimedia center will be able to run different features such as a photo gallery, an mp3 player, and a game center, and it is designed to be controlled using the MCB1700's joystick. The photo gallery allows users to view Bitmap images on the LCD screen. To achieve this, Bitmap files need to be converted into C files containing arrays of unsigned chars using GIMP. The gallery can be navigated using the joystick, providing an interactive and visually appealing experience. The mp3 player is capable of streaming audio from a connected PC to the MCB1700 board and uses the potentiometer to adjust the volume of the audio file that is streamed. The interface developed will be able to connect to the PC when selected and disconnect when exiting the player. A splash screen on the LCD can enhance the user experience, and audio should only be played when the player is enabled. The game center will implement one or more games using the LCD and joystick. The choice of games is open, but simple word games are discouraged. Games like Tetris, Snake, Flappy Birds, Bounce and Pac-Man can be implemented, offering interactive features for users.

Throughout the project, it's essential to understand and utilize the provided project files, include paths, and startup code. The common folder contains valuable resources that can help in project development. Developers should also consider project settings, scatter files, and flash initialization files when working on the multimedia center. In summary, the final project aims to create a multimedia center with a user-friendly interface, offering features like a photo gallery, mp3 player, and interactive games. Successful implementation involves converting BMP files, streaming audio from a PC, and providing an engaging experience for users through the MCB1700 board's LCD and joystick controls. Careful consideration of project resources and settings is crucial for a smooth development process.