

CSE3026 Embedded Systems
Project Overview

Goal: In this project, you will design a device that comprises computing hardware and software to achieve any service based on this device. Preferably, this device is better connected to the internet either through WiFi or cellular network.

Team: 2~3 persons

The proposal which is due by Oct 19th in class should contain

1. Team name and members
2. Name of the device
3. Functions of the device
4. Market competitiveness
 - A. Why do people buy it? Who will buy it?
 - B. Other competing devices, if any
 - C. Design strategies
5. Technical challenges

The final report which is due by Dec 14th should contain

1. Hardware design
 - A. Which CPU is used and why?
 - B. Peripherals
 - C. The interfacing between CPU and others
2. Software design
 - A. Language for each component
 - B. Software Architecture (OS, Middleware, Applications)
3. Justification of your design decisions (VERY important)
 - A. Comparisons with other alternatives
 - B. Assessment of delay for each function
 - C. Power consumption assessment
4. User Interface

Presentation and evaluation during the last week of the class

You can find some samples at

<http://www1.cs.columbia.edu/~sedwards/classes/2004/4840/index.html>

<http://www.ece.cmu.edu/~ece549/spring08/>