**CPE301 – SPRING 2019**

# Midterm II (Final Project)

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Primary Github address: https://github.com/buenj1/submission\_da.git Directory:

Submit the following for all Labs:

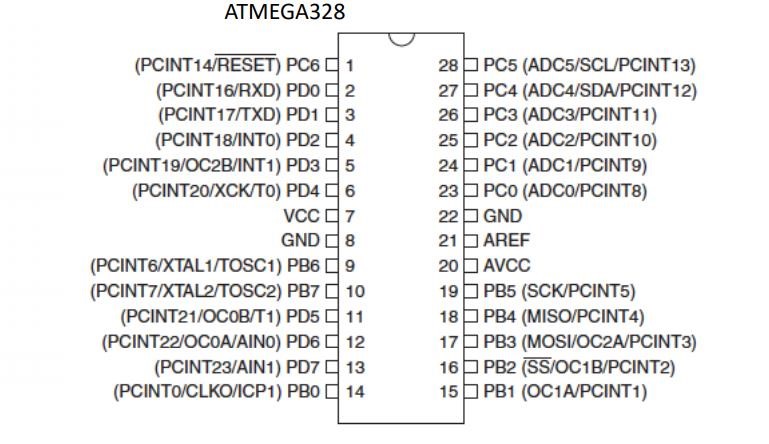
1. In the document, for each task submit the modified or included code (only) with highlights and justifications of the modifications. Also, include the comments.
2. Use the previously create a Github repository with a random name (no CPE/301, Lastname, Firstname). Place all labs under the root folder ESD301/DA, sub-folder named LABXX, with one document and one video link file for each lab, place modified asm/c files named as LabXX-TYY.asm/c.
3. If multiple asm/c files or other libraries are used, create a folder LabXX-TYY and place these files inside the folder.
4. The folder should have a) Word document (see template), b) source code file(s) and other include files, c) text file with youtube video links (see template).

## 1. COMPONENTS LIST AND CONNECTION BLOCK DIAGRAM w/ PINS

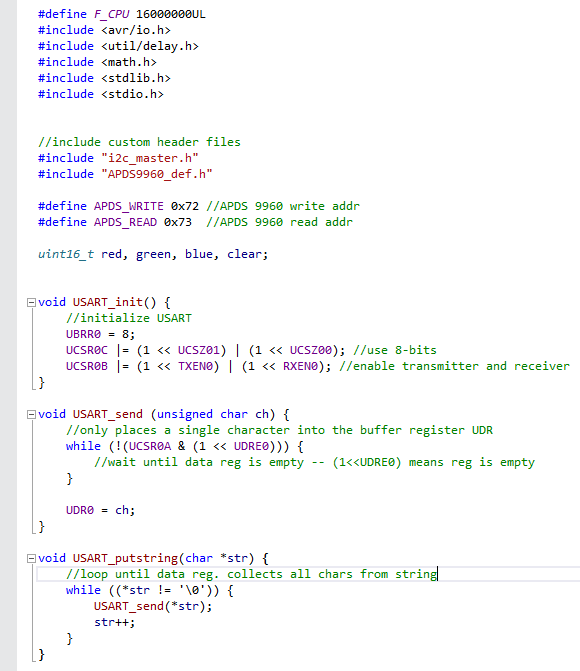
Components: atmega328p Xplained Mini board, jumper wires, APDS 9960, ESP-01

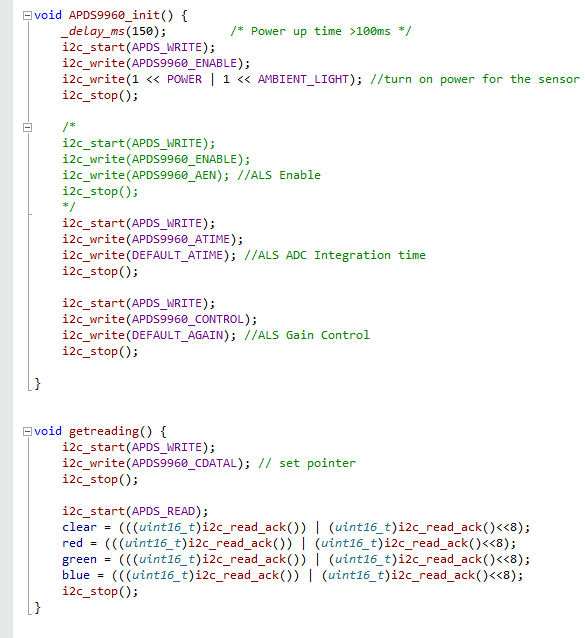
Block Diagram:

ATMEGA328P block diagram:



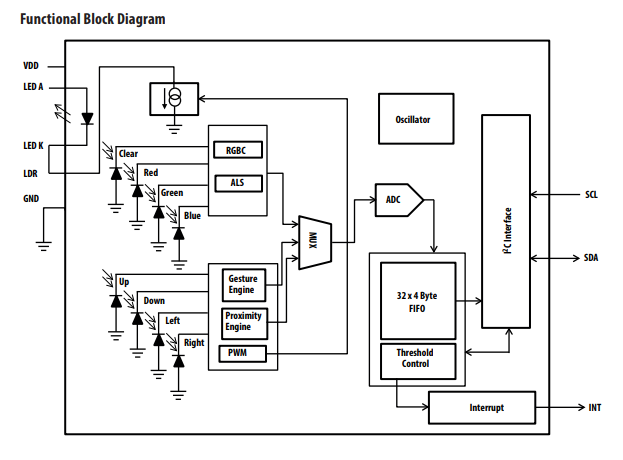
## 2. INITIAL/MODIFIED/DEVELOPED CODE OF TASK

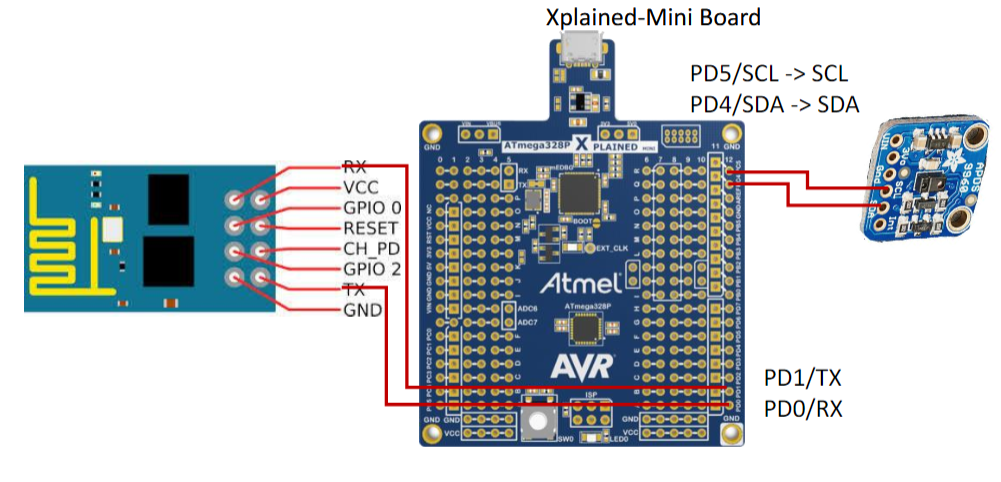




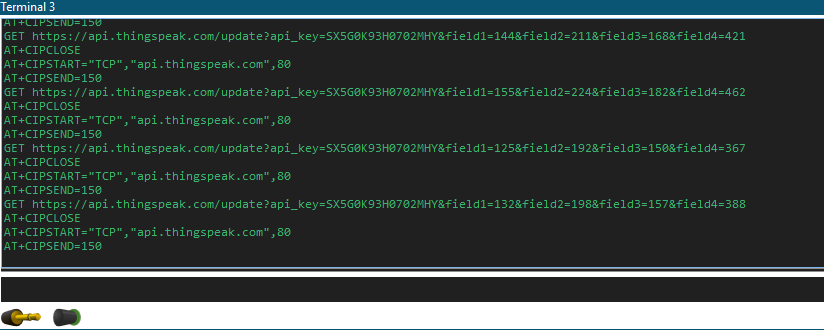


## 3. SCHEMATICS

ADPS 9960 schematic:



## 4. SCREENSHOTS OF EACH TASK OUTPUT (ATMEL STUDIO OUTPUT)

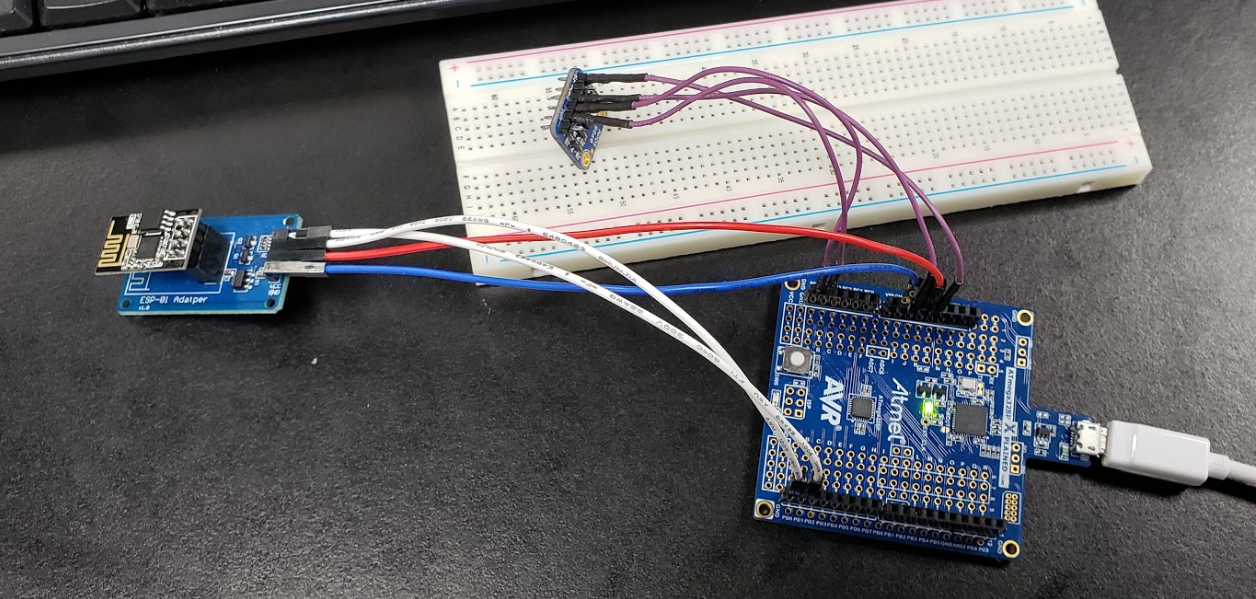
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Thingspeak Graphs:



Channel ID: **780966**

## 5. SCREENSHOT OF EACH DEMO (BOARD SETUP)



**6. VIDEO LINKS OF EACH DEMO**

<https://www.youtube.com/watch?v=tNR81cXKYEQ>

## 7. GITHUB LINK OF THIS DA

https://github.com/buenj1/submission\_da.git

**Student Academic Misconduct Policy**

<http://studentconduct.unlv.edu/misconduct/policy.html>

“*This assignment submission is my own, original work*”. JOHN PATRICK BUEN