Lab 3: Simple iPod with Volume Indication

Author: Ruyi Zhou 49581911

Lab Section: L2C

1. *My SOF file is located at:*

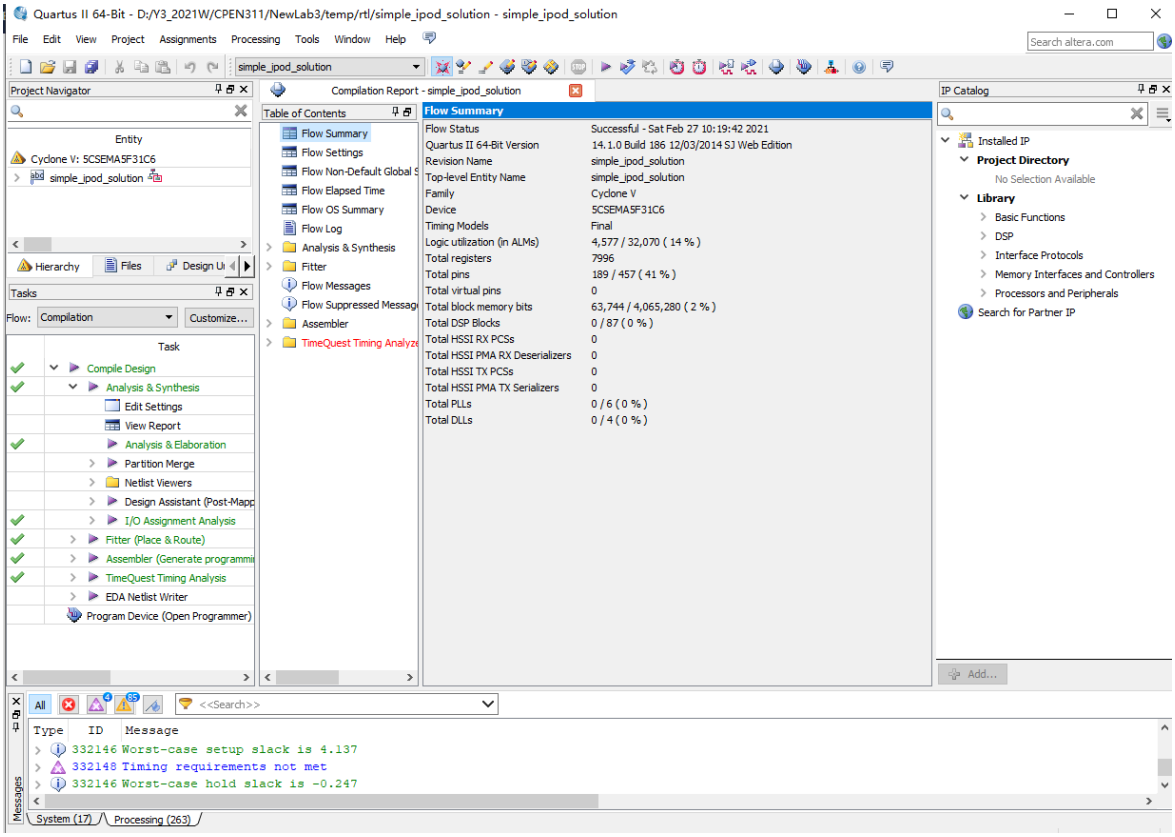
D:\Y3_2021W\CPEN311\NewLab3\temp\ rtl
Named: simple_ipod_Solution.sof

2. *The status of the lab:*

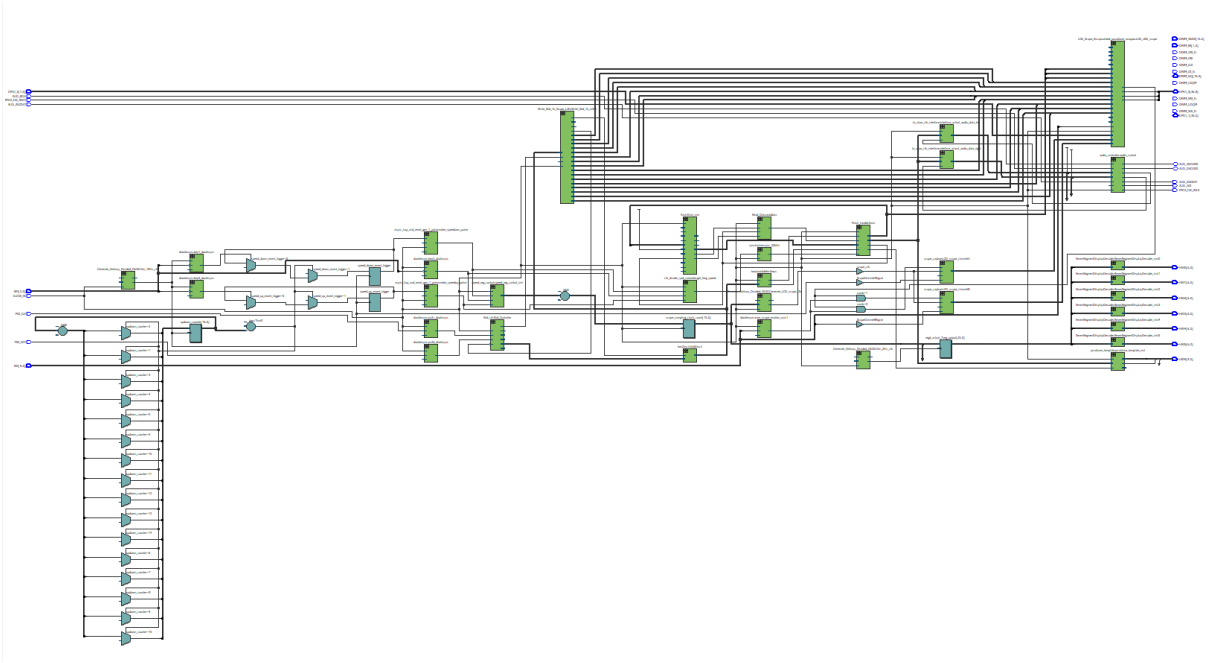
My design can work perfectly. The indicator LEDs can change with the volume of the song and it also can reflect the response of the speed of the song. In addition, the 1-Hz heartbeat LED also works well.

3. *Simulation screenshots:*

Since we don't need to simulate in this lab, I only put the screen shot of the successful compilation in Quartus here.



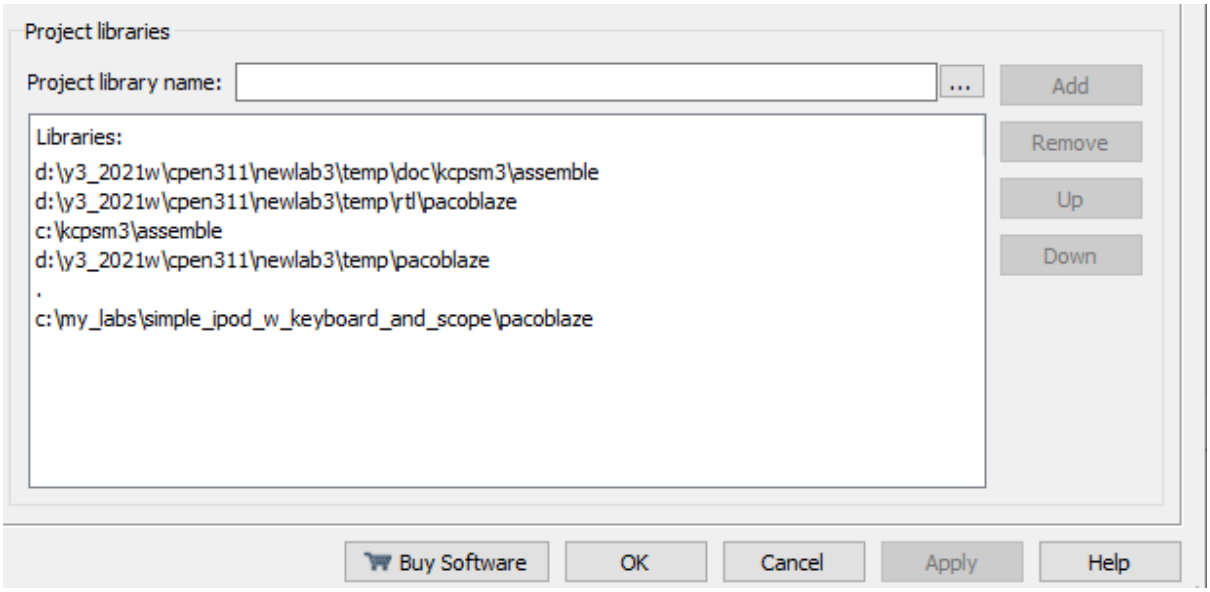
RTL view of the design:



4. Additional information:

-The code files (.v) are in **rtl**, the KCPSM3 (.psm) files are in **doc**.

-To compile in Quartus, you should first set up the Library in Quartus as following:



(Please ignore the all **c:**/since I put KCPSM3 in C when I did the lab. When I submit the lab, I put all the files in D:/). If you download my files in C drive, you should change to the corresponding location.

Tips to run:

After you download the file on your computer (let's assume you download it into C drive), the first thing is to set up the DOSBox. The default drive for the DOSbox is Z:/, so we need to do:

1. mount c c:/
2. cd "*the location of the '**Assemble**"*"
3. KCPSM3 pracpico > compile.log

Make sure to use the **left shift** for the '>'.

After a few minutes, a .MEM file will be generated. To check if it is successful, click the COMPILE.LOG and check if the bottom line shows the 'successful'. If so, copy the .MEM file and paste into the **rtl**/, and start the compilation. It should work.

-If you have any questions please let me know during my demo session. I am very willing to demo all the features I have in this lab. Finally, this lab is really fun.