ELC 2137 Lab 01: Git and LaTeX Intro

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Summary

In this lab, it talk about two tools that are es-pecially suited for programming. Git is a version con-trol software that helps you keep track of modifica-tions you make to a code project and collaboratewith others on that project. LaTeX is a typesettinglanguage that can produce professional-looking doc-uments and makes including code very easy.

Q&A

1. What is your GitHub user name?

   yiting-wang1

2. What LaTeX environment produces a bulleted(non-numbered) list?

   The bulleted lists are produced by the itemize environment. Each entry must be preceded by the control sequence `\item`.

3. Write the equation `y(t) = 1/2 e^t` using Latex equation formatting.

$$y(t) = 1/2e^t$$

4. What is the shortcut key for compiling your Latex document?

   - F5 – compile to PDF
   - Starting typing a command, then use arrows to choose the desired auto-complete command, and press Enter. For example, type `\V` and the first item in the pop-up list should be the `\Verilog` command.
   - In tables, TeXstudio will highlight things in red when the number of columns specified doesn't match the number of columns you have in a particular row. Summary: When nothing is red, you have the right number everywhere!
   - Text formatting, similar to MS Word:
     - Ctrl+b = **bold**
     - Ctrl+i = *italic*
     - Ctrl+Shift+t = `typewritter (monospaced)`

- Ctrl+Shift+i = insert "`\item` "
- Standard Windows shortcuts:
  - Ctrl+z = undo
  - Ctrl+y = redo
  - Ctrl+c = copy
  - Ctrl+x = cut
  - Ctrl+v = paste

Results

Figure 1 is the replication of the table and figure shown in Figure 1.1 in Lab 1 Git and LaTex Intro. It uses a single figure environment to ensure that the table andimage do not get separated.

Binary	Hex	Decimal
0000	0	0
0010	2	2
0100	4	4
0110	6	6
1000	8	8
1010	A	10

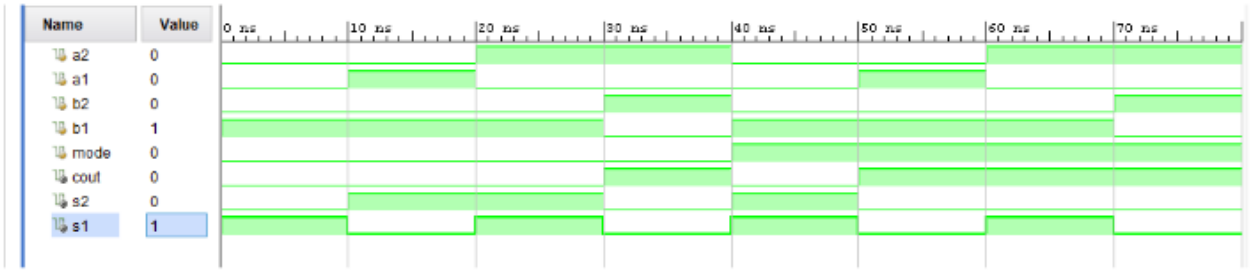

Figure 1: Table and simulation waveform to reproduce

This part is using the trim and cropoptions for the `\includegraphics` command to just get the part of the image people want. Figure 2 is the original one, and Figure 3 is the logo cropping the top and bottom.

Figure 3 is the picture after I commit these changes to my repo and push them toGitHub. In GHD, the the History tab to show me all of my commits thus far.

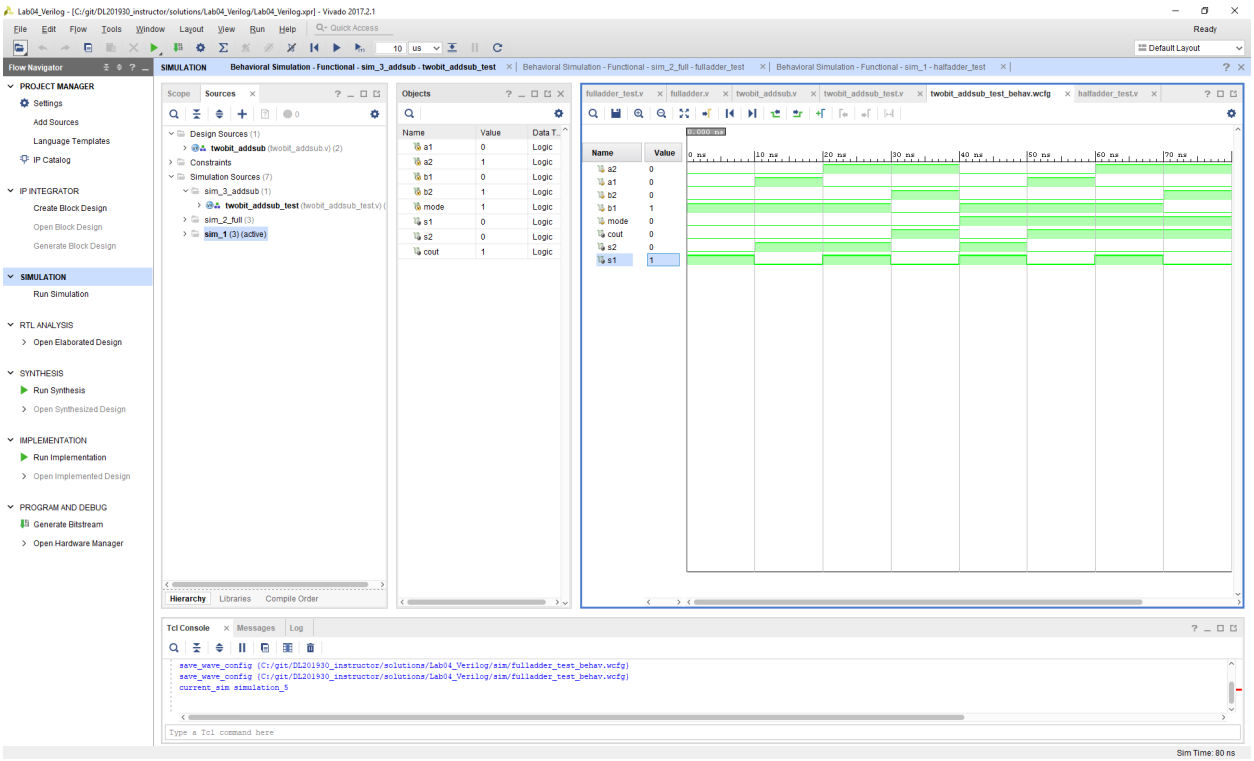

Figure 2: This is the original logo.

Code

Here is the code including from examplecode.sv in the Code section.

```
module example
#(parameter BITS=4)
(
input [BITS-1:0] in0, in1,
input sel,
output [BITS-1:0] out
);


// Choose in1 or in0
out = sel ? in1: in0;
endmodule
```

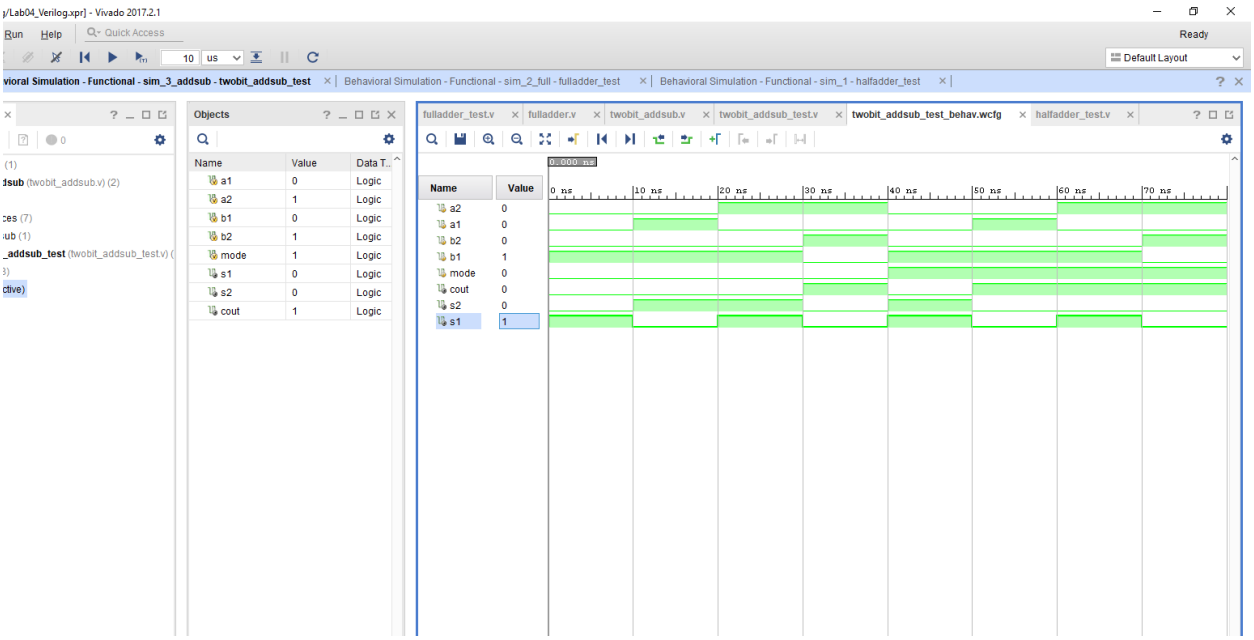

Figure 3: This is the logo cropping the top and bottom.

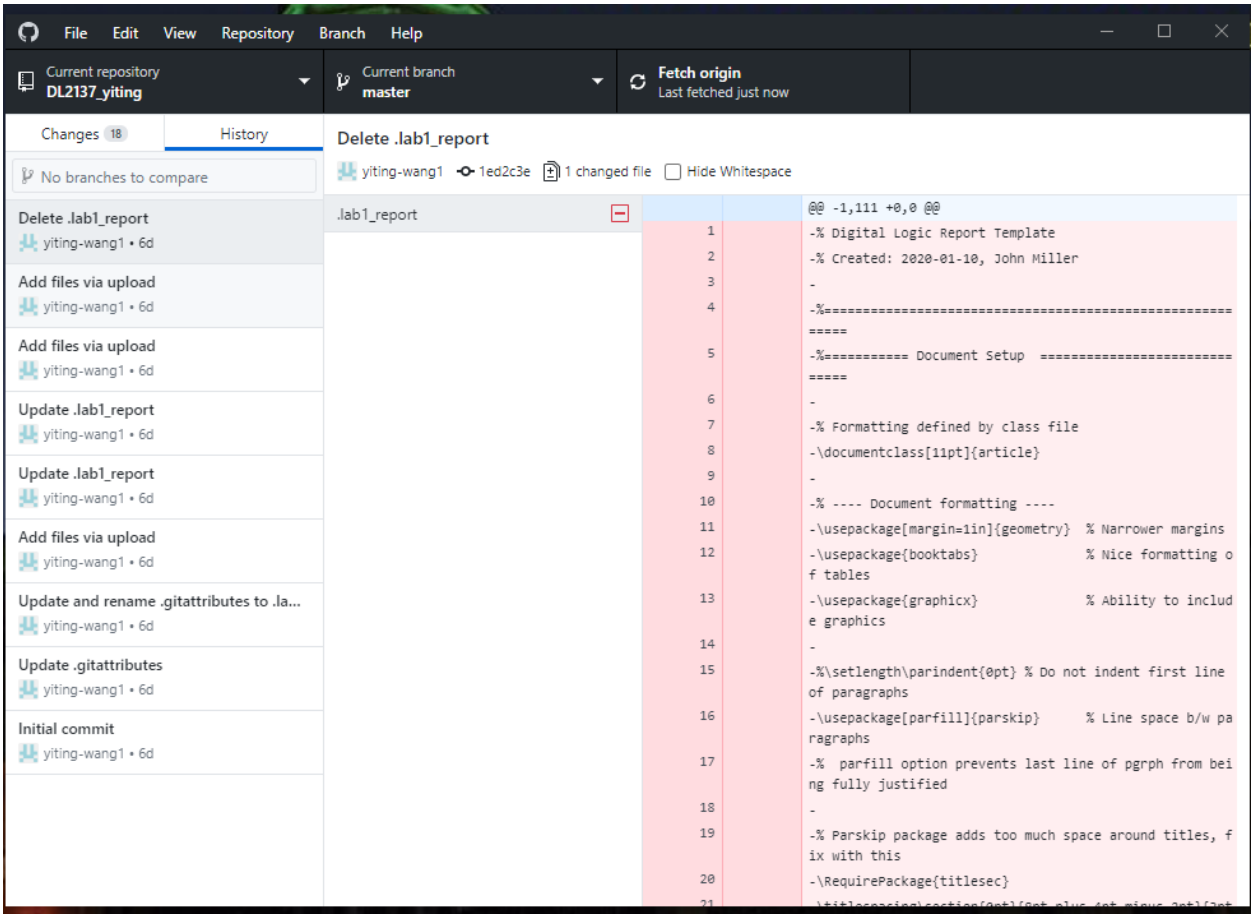

Figure 4: This is the screenshot of the GitHub History tab