

Report and Video Guidelines

Cover Pages and Templates

Each submission *must* include the following on a separate cover page: the course number and name, the lab or assignment number and title, your name and BCIT ID, and the date the document was created.

You may find it helpful to create a document template that you can re-use for future submissions. One is available on the course web site.

Program Listings

You will need to include Verilog code in most lab reports. Do *not* paste a screen capture. You *must* include your code as text using a monospaced font with no extra space between lines.

You can do this by applying a style to your text. Paste your code into your report and select it. In Microsoft Word select **Apply styles...** from the **Styles** gallery, enter `HTML Preformatted` in the text box and click on **Apply**. In LibreOffice enter `Preformatted Text` in the style text box. Note that you can enter these style names even if they are not one of the choices in the drop-down box.

Auto-Indenting Code

If you're not sure if your code meets the indentation requirements you can fix it on the course web site at **Course Information > indent**.

Syntax Highlighting

The Notepad++ editor can add syntax highlighting to your code. This is optional.

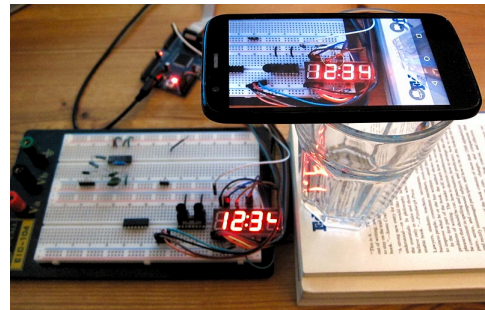
Install [Notepad++](#) using the *Custom* install so you can include the **NppExport** plugin during the installation.

Open your `.sv` file with Notepad++. Select **Edit > Select All** and then **Plugins > NppExport > Copy RTF to clipboard**. Finally, paste your code into your report using the "Keep source formatting" option.

Videos

Videos of your lab demonstrations must be viewable on a web browser. Text or digits in the video must be upright.

You can put a cell phone on top of books or a glass to hold it steady while you record your demonstration:



Re-Encoding Videos

It's strongly recommended that you use Microsoft Photos, included in Windows 10, to rotate and re-encode your videos.

Open your video file with Microsoft Photos. Under **Edit & Create** select **Create a video with text**. Select a name for the video (e.g. `lab1demo`). If necessary, use **Trim** to remove the parts of the video that you don't need. Use the rotate button to rotate the video so any numbers are upright. Select **Finish video**, Low (540p) video quality and Export your converted video to a new `.mp4` file.

Now drag the file onto an open browser window and check that the file plays in the browser, *not* in another application such as Windows Media Player.

After Submitting

After submitting your video make sure it plays properly in your browser and that any digits are upright.

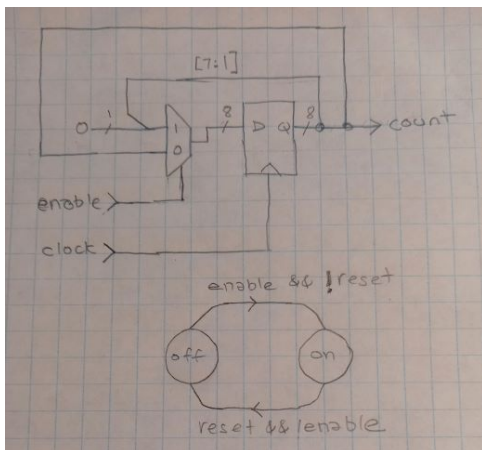
Diagrams

Diagrams must be legible. They may be drawn by hand or created with a drawing or CAD program.

Unless otherwise specified, diagrams must be drawn by the student rather than generated from the HDL by the RTL Netlist Viewer. Use symbols similar to those in the lecture notes. Label ports and signals with their names. Label buses with the bus width n if the indices are $[n-1:0]$ or the actual bit indices otherwise. Label multiplexer inputs with the corresponding value of the select input.

State transition diagrams should show the state names and logical expressions for state transition conditions.

The example below minimally meets these requirements. It's a photo of a hand-drawn schematic cropped and scaled using Microsoft Photo¹.



There are also free diagram-drawing programs such as [LibreOffice Draw](#), and [diagrams.net](#) as well as on-line schematic editors provided by vendors such as [Scheme-it](#) or [EasyEDA](#). However, if you're not already familiar with using a drawing or schematic capture program it will be faster to draw the diagrams by hand.

¹Open with Microsoft Photos, use the Crop and Rotate and Adjustments tabs to fix any issues, "Save a Copy" to a new file, select Resize from the menu (...), and save as a "Small" image before embedding in your report. If you have one, a scanner will do a better job.