**DAILY ASSESSMENT FORMAT**

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| **Date:** | **5 June 2020** | **Name:** | **Shreya poojary** |
| **Course:** | **HDL design** | **USN:** | **4al16ec074** |
| **Topic:** | **Verilog Tutorials and practice programs**  **Building/ Demo projects using FPGA** | **Semester & Section:** | **8-B** |
| **Github Repository:** | **shreya-test** |  |  |

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| **Image of session** |
| **Report**  **Introduction**  Verilog is a HARDWARE DESCRIPTION LANGUAGE (HDL). A hardware description Language  is a language used to describe a digital system, for example, a network switch, a microprocessor or a memory or a simple flip−flop. This just means that, by using a HDL one can describe any hardware (digital ) at any level.  Capture.PNG  **Design and tool flow**  **Various stages of ASIC/FPGA**   * Specification : Word processor like Word, Kwriter, AbiWord, Open Office.   High Level Design : Word processor like Word, Kwriter, AbiWord, for drawing waveform use tools like waveformer or testbencher or Word, Open Office.   * Micro Design/Low level design: Word processor like Word, Kwriter, AbiWord, for drawing waveform use tools like waveformer or testbencher or Word. For FSM StateCAD or some similar tool, Open Office. * RTL Coding : Vim, Emacs, conTEXT, HDL TurboWriter * Simulation : Modelsim, VCS, Verilog−XL, Veriwell, Finsim, iVerilog, VeriDOS. * Synthesis : Design Compiler, FPGA Compiler, Synplify, Leonardo Spectrum. You can download this from FPGA vendors like Altera and Xilinx for free. * Place & Route : For FPGA use FPGA' vendors P&R tool. ASIC tools require expensive P&R tools like Apollo. Students can use LASI, Magic. * Post Si Validation : For ASIC and FPGA, the chip needs to be tested in real environment. Board design, device drivers needs to be in place.   **VERILOG HDL SYNTAX AND SEMANTICS**  **Lexical Conventions**  The basic lexical conventions used by Verilog HDL are similar to those in the C programming  language. Verilog HDL is a case−sensitive language. All keywords are in lowercase.  **White Space**  White space can contain the characters for blanks, tabs, newlines, and form feeds. These characters are ignored except when they serve to separate other tokens. However, blanks and tabs are significant in strings.  White space characters are :  • Blank spaces  • Tabs  • Carriage returns  • New−line  • Form−feeds |