**DAILY ASSESSMENT FORMAT**

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| **Date:** | | **4-06-20** | | **Name:** | **RACHANA C HULIKATTI** |
| **Course:** | | **Digital Design Using HDL** | | **USN:** | **4AL17EC108** |
| **Topic:** | | **Hardware modeling using Verilog &amp;**  **fpga and asic** | | **Semester & Section:** | **6TH B** |
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| **FORENOON SESSION DETAILS** |
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| **Report:**  **Hardware modeling using Verilog**  **Hardware modeling using Verilog.it uses various digital circuit modeling issues using Verilog**  **,writing test benches and some case studies.**  **Fpga and asic topics are covered, some are introductory, and others will evolve over time.**  **This paper should still give you a lot of helpful information if you’re new to the world of**  **FPGAs.What are the most important things you should know right away?Get out of the software**  **mindset – You’re not writing software. Let me say that again because this is the single most**  **important point if you’re thinking about working with FPGAs.You-are-NOT-writingsoftware.converters and PLLs. I put re- in parenthesis because there are actually one-timeprogrammable**  **FPGAs, where once you configure them, that’s it, never again. However, most FPGAs you’ll come**  **across are going to be re-configurable. So what do I mean by digitally configurable ASIC?I mean**  **that at the core of it, you’re designing a digital logic circuit, as in AND, OR, NOT, flip-flops, etc. Of**  **course that’s not entirely accurate and there’s much more to it than that, but that is the gist at its**  **core.he players –There are currently two big boys: Altera (part of Intel) and Xilinx, and some**  **supporting players (e.g. Actel (owned by Microsemi)).The main underlying technology options are**  **SRAM-based (this is the most common technology), flash, and anti-fuse. As you might imagine,**  **each option has its own pros and cons. Check this out for some more details.Strengths / best suited**  **for:Much of what will make it worthwhile to utilize an FPGA comes down to the low-level functions**  **being performed within the device. There are four processing/algorithm attributes defined below that**  **FPGAs are generally well-suited for. While just one of these needs may drive you toward an FPGA,**  **the more of these your application has, the more an FPGA-based solution will appeal.Parallel**  **processes – if you need to process several input channels of information (e.g. many simultaneous A/D**  **channels) or control several channels at once (e.g. several PID loops). High data-to-clock-rateratio**  **processing, image processing, or control algorithms. Weaknesses / not optimal for:With any**  **significant benefit, there’s often times a corresponding cost.**  **blocks that allow for various voltage standards (e.g. LVCMOS, LVDS) as well as timing delay**  **elements to help align multiple signals with one another (e.g. for a parallel bus to an external RAM.Clocking and routing –This is really a more advanced topic, but critical enough to at least**  **introduce. You’ll likely use an external oscillator and feed it into clocking resources that can**  **multiply, divide, and provide phase-shifted versions of your clock to various parts of the**  **FPGA.Routing resources not only route your clock to various parts of the FPGA, but also your data.communications (e.g. high-speed serial, Ethernet), low-speed A/D converters for things like**  **measuring slowly varying voltages, and microprocessor cores to handle some of the functions that. FPGA logic is not as well suited for.Soft cores – These are functional blocks that don’t have their**  **own dedicated logical resources.** |

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| **Date:4/6/2020** |  | **Name: RACHANA C HULIKATTI** |  | |
| **Course:PYTHON** |  | **USN:4AL17EC108** |  | |
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| **Topic: Project Exercise on Building a Geocoder Web Service** |  | **Semester & Section:6TH B SEC** |  | |
| **AFTERNOON SESSION DETAILS** | | | |
| **Image of session** | | | |
| **Report – Report can be typed or hand written for up to two pages.** Geocode the placenames in the CSV using Geopy, Pandas In our data file, we have a list of placenames in our CSV data (the Area Name column), but no coordinates. What we want to do then is to somehow generate coordinates from these locations. This process is called geocoding.  So here is our first problem to solve: how can we geocode placenames? How could we take an entry such as “CN Tower” and add the coordinates 43.6426,-79.3871 to it automatically?  To clarify, we need to figure out how to gather coordinates for a location for each row of a CSV file in order to display these locations on a web map.  There’s a simple the biggest advantages to Python is the impressive amount of libraries which act like pluggable tools to use for many different tasks. Knowing that this is a good programmatic approach, we’re now going to build a Python script that will  python get-pip.py | | | |