

## **DAILY ASSESSMENT REPORT**

<b>Date:</b>	<b>04 June 2020</b>	<b>Name:</b>	Kishan shetty
<b>Course:</b>	<b>DIGITAL DESIGN USING HDL</b>	<b>USN:</b>	<b>4AL17EC041</b>
<b>Topic:</b>	<b>Hardware modelling using Verilog</b>	<b>Semester &amp; Section:</b>	<b>6<sup>th</sup> sem &amp; A sec</b>
<b>GitHub Repository:</b>	<b><u>Kishanshetty-041</u></b>		

### **FORENOON SESSION DETAILS**

#### **Objective of Hardware Modeling**

- Learn about the Verilog hardware description language.
- Understand the difference between behavioral and structural design styles.
- Learn to write test benches and analyze simulation results.
- Learn to model combinational and sequential circuits,
- Distinguish between good and bad coding practices.
- Case studies with some complex designs.

#### **VLSI Design Process**

- Design complexity increasing rapidly
- Increased size and complexity
- Fabrication technology improving
- CAD tools are essential
- Conflicting requirements like area, speed, and energy consumption
- The present trend
- Standardize the design flow
- Emphasis on low-power design, and increased performance

#### **Moore's Law**

- Exponential growth
- Design complexity increases rapidly
- Automated tools are essential
- Must follow well defined design flow

**Need to use Computer Aided Design (CAD) tools.**

- Hardware Description Language (HDL)
- Based on HDL provide formats for representing the outputs of various design steps
- A CAD tool transforms its HDL input into a HDL output that contains more detailed information about the hardware.
  - ❑ Behavioral level to register transfer level
  - ❑ Register transfer level to gate level
  - ❑ Gate level to transistor level
  - ❑ Transistor to the layout

### Task

Implement a simple T Flipflop and test the module using a compiler.

```
module t_ff (t,q,clk);
input t,clk;
output reg q = 0;
always @ (posedge clk)
begin
    if (t==1)
        begin
            q=~q;
        end
    else
        begin
            q=q;
        end
    end
end
endmodule
```

Date:	04/06/2020	Name:	Kishan shetty
Course:	The Python Mega Course: Build 10 Real World Applications	USN:	4AL17EC041
Topic:	Application 8: Build a Web-based Financial Graph	Semester & Section	6 th 'A'
Github Repository	Kishanshetty-041		

## Image of session

```

1 from flask import Flask, render_template
2
3 app = Flask(__name__)
4
5 @app.route('/plot/')
6
7 def plot():
8     from pandas_datareader import data
9     import datetime
10    from bokeh.plotting import figure, show, output_file
11    from bokeh.embed import components
12    from bokeh.resources import CDN
13
14    start_time = datetime.datetime(2020,1,1)
15    end_time = datetime.datetime(2020,6,3)
16
17    Company_tickname = "TCS"
18
19    df = data.DataReader(name = Company_tickname, data_source = "yahoo", start = start_time, end = end_time)
20
21    def inc_dec (c, o):
22        if c > 0:
23            value = "Increase"
24        elif c < 0:

```

```

remote:      https://shastry.herokuapp.com/ deployed to Heroku
remote:
remote: Verifying deploy... done.
To https://git.heroku.com/shastry.git
   6a99a5e..3c5a6e2 master -> master
PS D:\udemy_py\codes\App4\My_Website> heroku open
PS D:\udemy_py\codes\App4\My_Website>

```

## **Application 8: Build a Web-based Financial Graph**

- Python script to plot stock market data using bokeh library and deploy the bokeh plot to a live website
- . • A ticker symbol or stock symbol is an abbreviation used to uniquely identify publicly traded shares of a particular stock on a particular stock market. A stock symbol may consist of letters, numbers or a combination of both. "Ticker symbol" refers to the symbols that were printed on the ticker tape of a ticker tape machine.
- Some of the examples are:
  - NYSE (New York Stock Exchange) uses the ticker symbol with 3 letters or few – such as ‘NYT’ for the New York Times Co. or ‘T’ for AT&T.
  - Symbols with 4 or more letters generally denote securities traded on the American stock exchange and NASDAQ.
  - Those ending in ‘X’ indicate mutual funds.
  - There are also certain symbols that denote specific status or type of security say, tickers ending in ‘Q’ indicate issuers which are under bankruptcy and letter ‘Y’ denotes security is an ADR.

