# DAILY ASSESSMENT FORMAT

| Date: | 02-06-2020 | Name: | M V Ramya |
|---|---|---|---|
| Course: | logic design | USN: | 4AL17EC045 |
| Topic: | FPGA Basics | Semester & Section: | 6th sem, A sec |
| Github Repository: | M V Ramya-045 | | |

## FORENOON SESSION DETAILS



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**FPGA Basics: Architecture, Applications and Uses**

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The field-programmable gate array (FPGA) is an integrated circuit that consists of internal hardware blocks with user-programmable interconnects to customize operation for a specific application.

# FPGA Design

8/6/2020

An FPGA-based design begins by defining the required computing tasks in the development tool, then compiling them into a configuration file that contains informations on how to look up the CLB's and other modules.

## CPLD vs FPGA

Originally, FPGAs include the block in fig 1 and little else, but now designers can choose from products with large range of features. Less complex devices such as simple programmable logic device (SPLD's) and complex programmable device (CPLDs) bridge the gap between discrete logic devices and entry-level FPGAs

4:1 mux and write test bench code to verify modu

## verilog design

```
module mux4:1 (iP, i0, i2, i3, i3, s0, s1, oIP);
reg y;
output y;
always @ (*)
begin
case ({s0,s1})
2'b00 : y = i0;
2'b01 : y = i1;
2'b10 : y = i2;
2'b11 : y = i3;
endcase.
end
endmodule.
```

## Test Bench

```
module tb_mux41;
reg i0, i2, i3, s0, s1;
wire Y;
mux41 mux (.i0(i0), .i1(i1), .i2(i2)., .i3(i3), .s0(s0), .s1(s1),.y)
initial begin
i0 = 1'b0;
i1 = 1'b0;
i2 = 1'b0;
i3 = 1'b0;
s0 = 1'b0;
s1 = 1'b0;
#45 $finish;
end
always #2 i0 = ~i0;
always #4 i1 = ~i1;
always #6 i2 = ~i1;
always #8 i3 = ~i1;
always # 3 s0 = ~s0;
always #3 s1 = ~s1;

always @(Y)

$display ("time = %0t INPUT VALUES : \t i0 = %b i1 = %b i2 = %b
          i3 = %b s0 = %b s1 = %b \t output value = %b
          $time, i0, i1, i2, i3, s0, s1, Y);

endmodule.
```

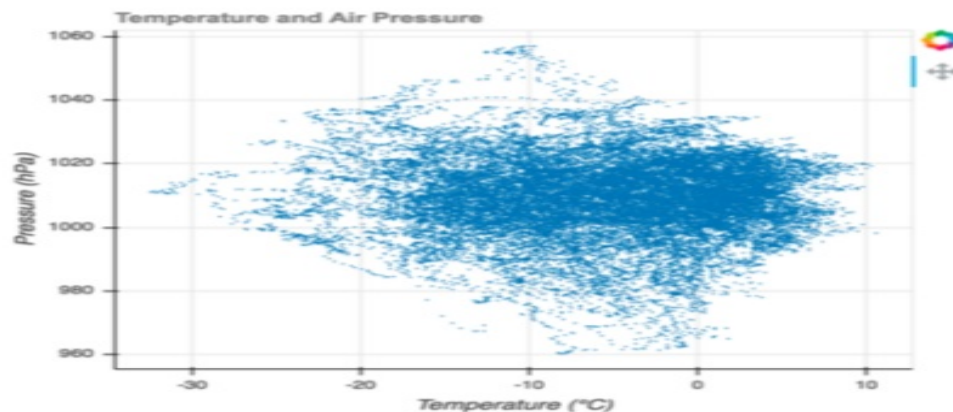| Date:02june2020 | Name: MV Ramya |
|---|---|
| Course: python | USN:4AL17EC045 |
| Topic:webscraping | Semester & Section: 6th sem Asec |

| AFTERNOON SESSION DETAILS |
|---|
| Image of session |

# Plotting Weather Data (Practice)

Produce the following graph using the data from this Excel file: http://pythonhow.com/data/verlegenhuken.xlsx



*Some notes:*

Temperature and pressure values in the Excel file have a scale factor of 10; you'll have to divide those values by 10 to get the actual observations.

And, yes, you can set your own fonts and colors, but be accurate with the rest of the plot elements.

## London

London is the capital of England and it's been a British settlement since 2000 years ago.

## Paris

Paris is the capital city of France. It was declared capital since 508.

## Tokyo

Tokyo is the capital of Japan and one of the most populated cities in the world.

# Python

## 1] Interactive Data Visualization with Bokeh

- Bokeh is a data visualization library in python that provides high-performance Interactive charts and plots
- It is possible to embed bokeh plots in Django and flask apps
- Bokeh provides two visualization interfaces to user : bokeh.
- A low level interface that provides high flexibility to application developers

## 2] Webscraping with Python Beautiful Soup

- Web scraping is a term used to describe the use of a program/ algorithm to extract and process large amount of data from the web.
- Wether you are a data scientist, engineer, or anybody who analyzes large amounts of datasets, the ability to scrape data from the web is a usefull skill to have
- Let's say you find data from the web, and there is no direct way to download it web scraping using
- Python is a skill to extract the data into a usefull form that can be imported