Date:- 1/6/20
Course:- Digital design using HDL
Topic:- Industry Application of FPGA

Name:- Harshitha.T
USN:- 4AL17EC046
Sem & Sec:- 6th B

* The impact of FPGA feature in industrial applications is analyzed in detail in three main areas, namely digital real-time simulation, advanced control techniques & electronic instrumentation, robotics, power system design

* FPGA V/s ASIC

⇒ A field programmable gate array is a semiconductor devices, containing programmable logic components called 'Logic blocks' and programmable interconnects

⇒ ASIC are designed for a specific applications they can be optimized to maximum, hence we can have high speed in ASIC designs.

* Working of FPGA

If we designing a digital ckt more than anything else, basically one layer of abstraction above the logic gate level

At the basic level, you need to think about how you're specifying the layout and equations at the LUTs and FF's

* An FPGA is a digital, ~~and~~ because there are analog mixed-signal aspects to modern FPGA's

Ex:- A/D converters and PLL's.

* A basic FPGA architecture consists of thousands of fundamental elements called configuration logic blocks

surrounded by a system of programmable interconnects called fabric.

- Depending on the manufacturer the CLB may also be reffered to as a logic block (LB) or logic element (LE) or logic cell (LC).

Date :- 1/6/20

Course- Python

Topic :- Interactive Data Visualization with Bokeh

Name:- Harshitha.T
USN:- 4AL17EC106
Sem & Sec :- 6th B

⇒ Making a basic bokeh line graph

```
# importing Bokeh
from bokeh.plotting import figure
from bokeh.io import output_file, show

* prepare some data
x = [3, 7.5, 10]
y = [3, 6, 10]
* prepare the o/p file.
output_file("line.html")
* create a figure object
f = figure()
* create a line plot
f.triangle(x, y)
```

⇒ Plotting percentage of women who received an engineering degree over years.

```
# importing bokeh and pandas
from bokeh.plotting import figure
from bokeh.io import output_file, show
import pandas.
* Prepare some data
df = pandas.read_csv("http://pythonhow.com/data.csv")
x = df["Year"]
```

y = df ["Engineering"]

* prepare the o/p file

  output_file ("line_from_bachelors.html")

* Create a figure object

  f = figure()

* Create line plot

  f.line(x, y)

* Write the plot in the figure object

  show(f).

⇒ Visual attributes

After building the basic plot, you can customize its visual attributes including changing the title color & font. adding labels for x axis and y axes changing the color of the axes ticks etc.

* ~~Codes were learned to write~~
* Like above example code was thought
* For a complete list of visual attributes, see the styling visual attributes documentation page of Bokeh.