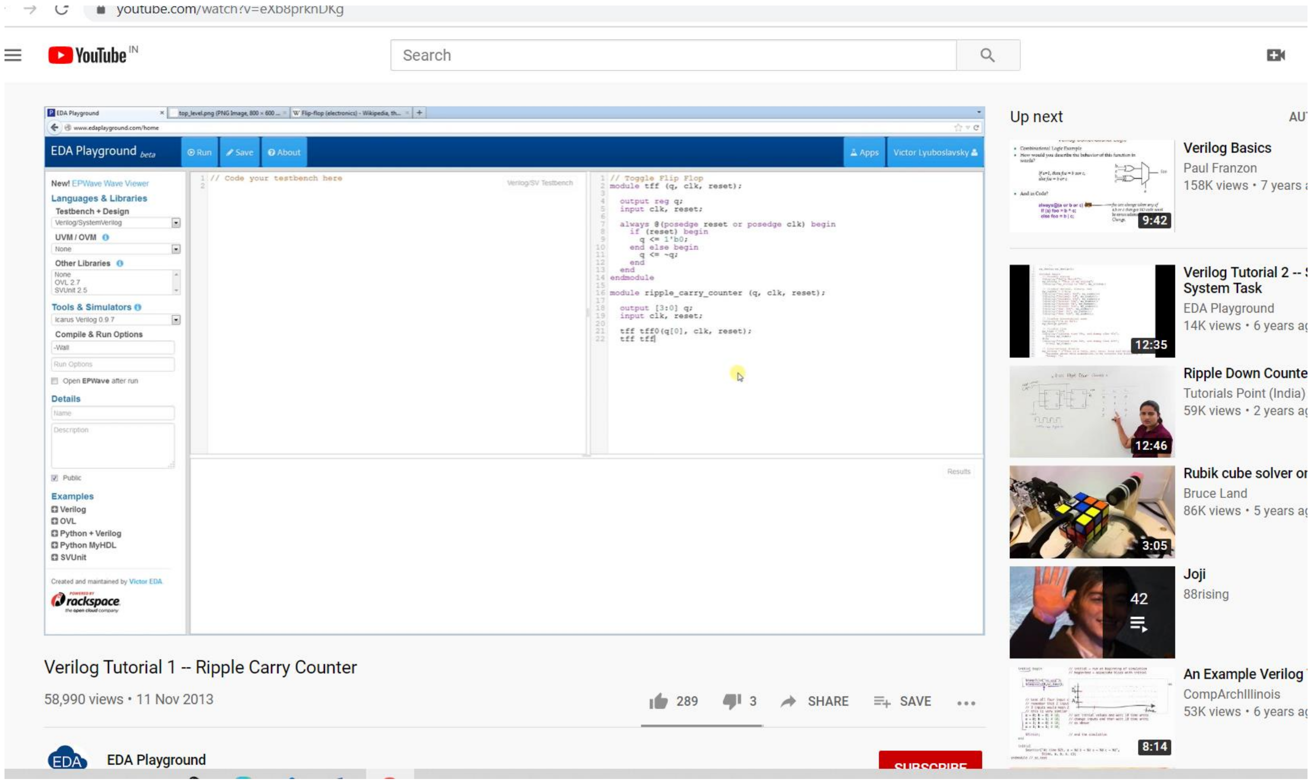
DAILY ASSESSMENT FORMAT

Date:	**3-06-2020**	**Name:**	**BINDUSHRI**
Course:	**Digital design using HDL**	**USN:**	**4AL17EC011**
Topic:	**1.EDA PLAYGROUND** **2.TASK**		**6th A**
Github Repository:	**Bindushri**		

FORENOON SESSION DETAILS



```
// Toggle Flip Flop
module tff (q, clk, reset);

  output reg q;
  input clk, reset;

  always @(posedge reset or posedge clk) begin
    if (reset) begin
      q <= 1'b0;
    end else begin
      q <= ~q;
    end
  end
endmodule

module ripple_carry_counter (q, clk, reset);

  output [3:0] q;
  input clk, reset;

  tff tff0(q[0], clk, reset);
  tff tff
```

Verilog Tutorial 1 -- Ripple Carry Counter

58,990 views • 11 Nov 2013

→ [illegible] playground
→ How to use the EDA playground
→ Steps to work in EDA.

```
module inverter(a,y);
        input a;
        output y;
        assign y=~a;
endmodule
```

test-bench

```
timescale 1ns|1ps
module testbench();
    reg a1;
    wire y1;
    inverter inv1(a1,y1);
  initial begin
        a1 = 1'b1;
        $display ("a=%b",a1);
        #1
        $display("y=%b",y1);
  end
  endmodule.
```

```
② module tff (q,clk,reset);

   output reg q;
   input clk,reset;
   always @(posedge reset or
        posedge clk) begin
   if (reset) begin
   q<=1'b0;
   end else begin
   q<=~q;
  end
  end
 endmodule
```

```
module ripple-carry-counter
 (q,clk,reset);
output [3:0] q;
input clk,reset;
tff tff0(q[0], clk ,reset);
tff tff1 (q[1], q[0], reset);
tff tff2 (q[2], q[1], reset];
tff tff3 (q[3],q[2],reset);
endmodule
```

testbench

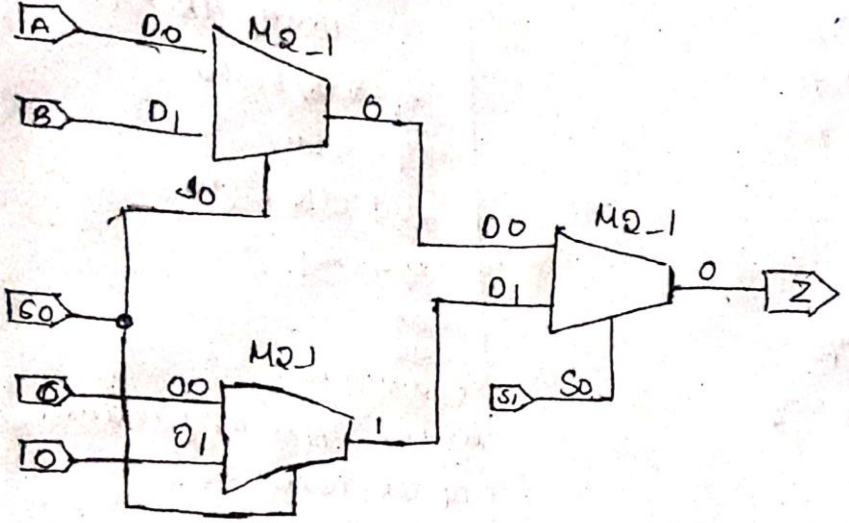
② testbench

```
module test;
        reg clk,reset;
        wire [3:0] q;
        ripple_carry_counter rcc(q,clk,reset);
        initial begin
        $dumpfile ("dump.vcd");
        $dumpvars (1,test);
         clk =1'b0;
         reset =1'b1;
        #10 reset =1'b0;

        #200;
         reset=1'b1;
        #10 reset =1'b0,
#50,
$finish,
end
always #5 clk=~clk;
endmodule.
```

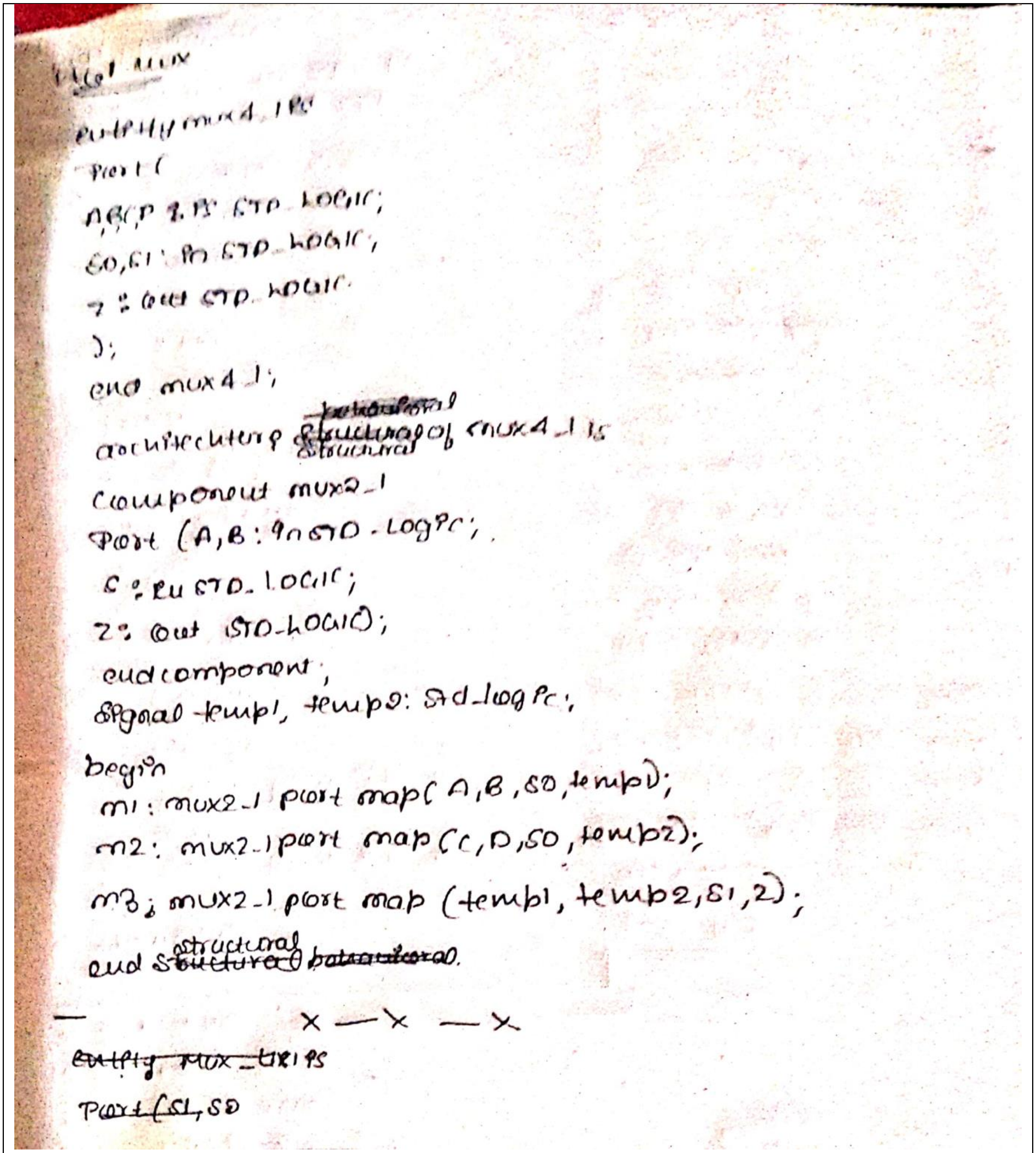
* Procedure to download the xllinx

Task-3

Impement 4 to 1 Mux using two 2 to 1 Mux using structur modelling style and test the module on online compiler.



```
~~VHDL~~ entity mux2_1 is
      Port(A,B: in STD-LOGIC;
      S: in STD_LOGIC;
      Z: out STD_LOGIC);
      end mux2_1;

      architecture Behavioral of MUX2_1 is
      begin
      Process (A,B,S) is
      begin
      if (S='0') then.
      Z<=A;
      else
      Z<=B;
      end if;
      end process;
      end Behavioral.
```



```
4x1 mux

entity mux4_1 is
port(
A,B,C,D : in STD_LOGIC;
S0,S1 : in STD_LOGIC;
Z : out STD_LOGIC
);
end mux4_1;
                ~~behavioral~~
architecture ~~structural~~ of mux4_1 is
              Structural
component mux2_1
port (A,B: in STD_LOGIC;
 S : in STD_LOGIC;
 Z: out STD_LOGIC);
 end component;
signal temp1, temp2: std_logic;
begin
 m1: mux2_1 port map(A,B,S0,temp1);
 m2: mux2_1 port map(C,D,S0,temp2);
 m3; mux2_1 port map (temp1, temp2,S1,Z);
     structural
end ~~Structural~~ ~~behavioral~~.

—          x — x  — x
~~entity mux_4x1 is~~
~~port(S1,~~ S0
```

Date:3june2020

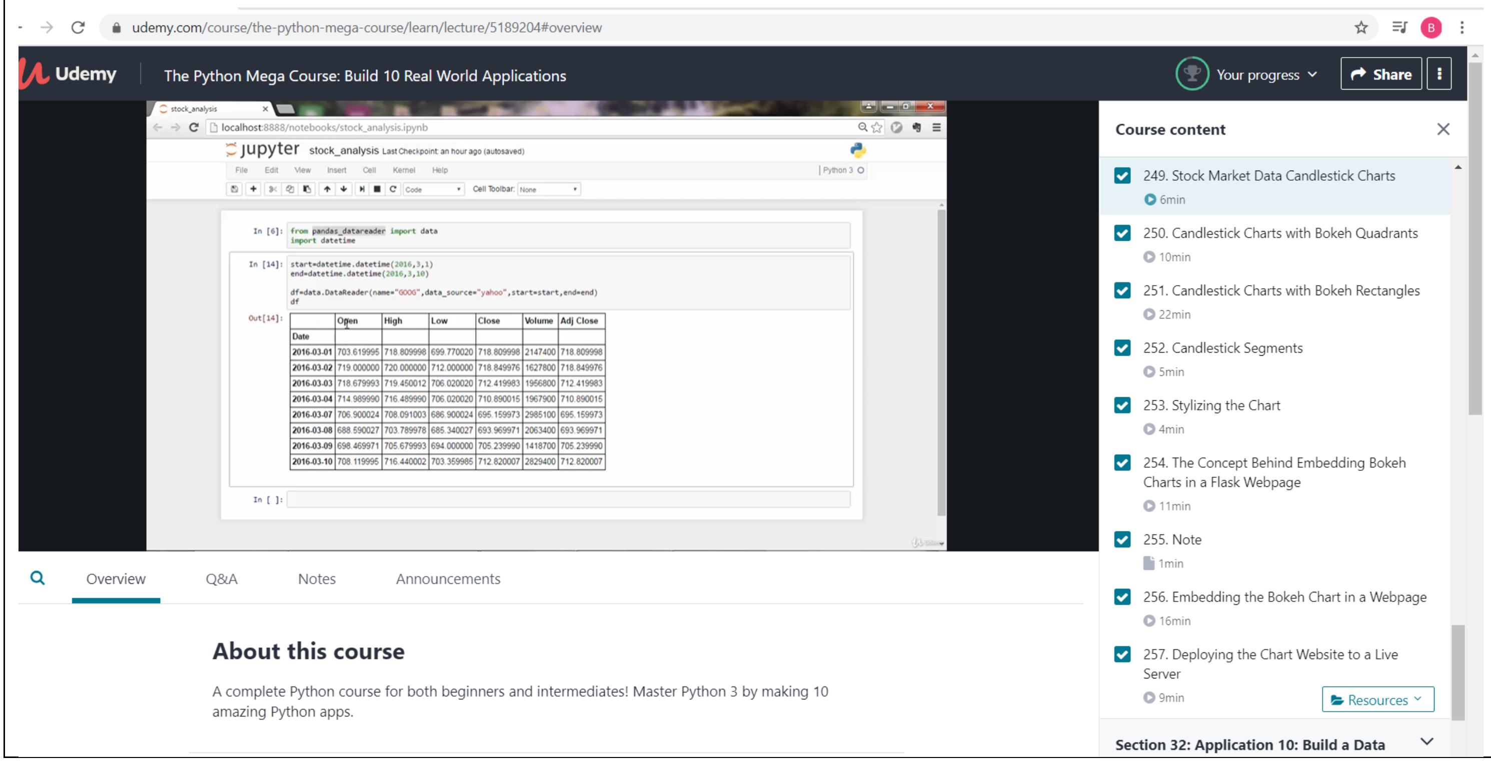
Name:Bindushri

Course: python

USN:4AL17EC011

Topic:sec 31 **Sem&Sec:6th A**

AFTERNOON SESSION DETAILS



udemy.com/course/the-python-mega-course/learn/lecture/5189204#overview

localhost:8888/notebooks/stock_analysis.ipynb

jupyter stock_analysis Last Checkpoint: an hour ago (autosaved)

```
In [6]:  from pandas_datareader import data
         import datetime

In [14]: start=datetime.datetime(2016,3,1)
         end=datetime.datetime(2016,3,10)

         df=data.DataReader(name="GOOG",data_source="yahoo",start=start,end=end)
         df

Out[14]:
```

	Open	High	Low	Close	Volume	Adj Close
Date						
2016-03-01	703.619995	718.809998	699.770020	718.809998	2147400	718.809998
2016-03-02	719.000000	720.000000	712.000000	718.849976	1627800	718.849976
2016-03-03	718.679993	719.450012	706.020020	712.419983	1956800	712.419983
2016-03-04	714.989990	716.489990	706.020020	710.890015	1967900	710.890015
2016-03-07	706.900024	708.091003	686.900024	695.159973	2985100	695.159973
2016-03-08	688.590027	703.789978	685.340027	693.969971	2063400	693.969971
2016-03-09	698.469971	705.679993	694.000000	705.239990	1418700	705.239990
2016-03-10	708.119995	716.440002	703.359985	712.820007	2829400	712.820007

```
In [ ]:
```

About this course

A complete Python course for both beginners and intermediates! Master Python 3 by making 10 amazing Python apps.

Course content

- ☑ 249. Stock Market Data Candlestick Charts — 6min
- ☑ 250. Candlestick Charts with Bokeh Quadrants — 10min
- ☑ 251. Candlestick Charts with Bokeh Rectangles — 22min
- ☑ 252. Candlestick Segments — 5min
- ☑ 253. Stylizing the Chart — 4min
- ☑ 254. The Concept Behind Embedding Bokeh Charts in a Flask Webpage — 11min
- ☑ 255. Note — 1min
- ☑ 256. Embedding the Bokeh Chart in a Webpage — 16min
- ☑ 257. Deploying the Chart Website to a Live Server — 9min

Section 32: Application 10: Build a Data

3-02-2020
Python Sec 31: web-Based Financial graph

~~Open~~ pip install pandas_datareader
In the folder open
>> Jupyter notebook.

```
In[ ]: from pandas_datareader import data
In [4]: data.DataReader(name=",

In[1]: from pandas_datareader import data
       import datetime
       from boken.plotting import figure, show, output_file
In [9]: start = datetime.datetime(2016,3,7)
        end = datetime.datetime(2016,3,10)

        df=DataReader(name="AAPL", data_source="googe", start=star
                                      end=end)

        df.
```

-to build chart

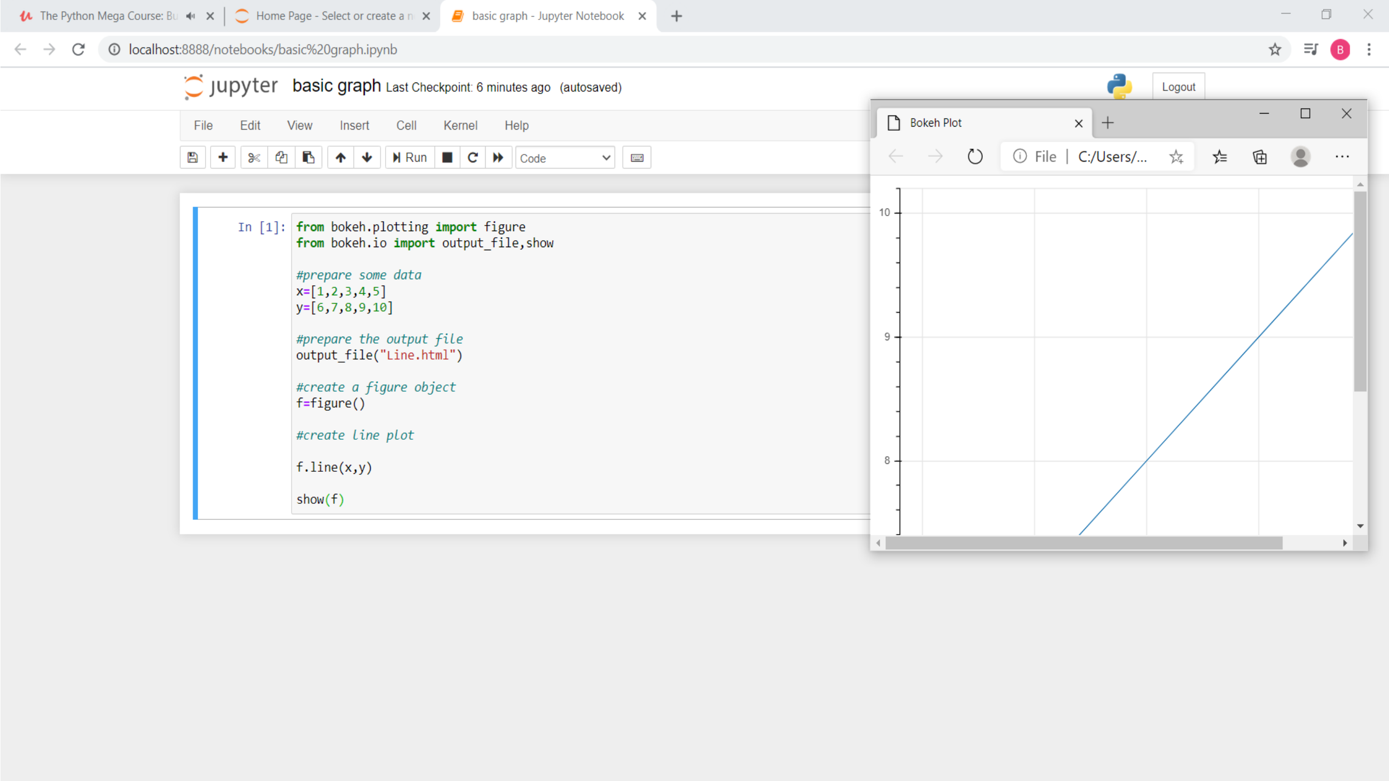
```
In[ ]  df.index [df.close > df.open]
In[3]  P=figure(x_axis_ type='datetime', width=1000, height=3
       P.tite="Candle stick chart"
       P.rect(df.index(df.close > df.open)), (df.open+df.close
~~In[2]~~ ~~df.index~~, hours_12, abs(df.open-df.close)), fill color
       ~~P.quad~~.                                   "gree", line color="b
       P.quad output_file ("CS.html")
              show(p)
```

2) continue.

```
In[22]: def inc_dec(c, o):
            if c > 0:
                value = "Increase"
            elif c < 0:
                value = "Decrease"
            else :
                value = "equal"
            return value
            df ["status"] = [inc_dec(c,o) for c,o in zip
                              (df.close, df.open)]

In[28]: df ["middle"] = (df.open + df.close)/2
        df ["Height"] = abs(df. close-df.open)

In[29]: df                    (output)
In[21]: date_decrease       -> op
In[ ]: p=figure(x_axis_type='datetime', width=1000, height=30
        p.title = "candlestick chart"
        hours_12 = 12*60*1000
        p.rect(df.index[df. Status= "Increase"], df.status=
                              "Increase"],
          hours_12, df.Height [df.status=="Increase"],
            fill_color="green", line_color="black")

     P.rect(df.index[df.Status == "Decrease"], df.Middle
                                     [df.status=="Decrease"]

          hours_12, df.Height[df.status=="Decrease"], fill_
                              color="red", line color="black")

     output_file("cs.html")
     show(p)
```

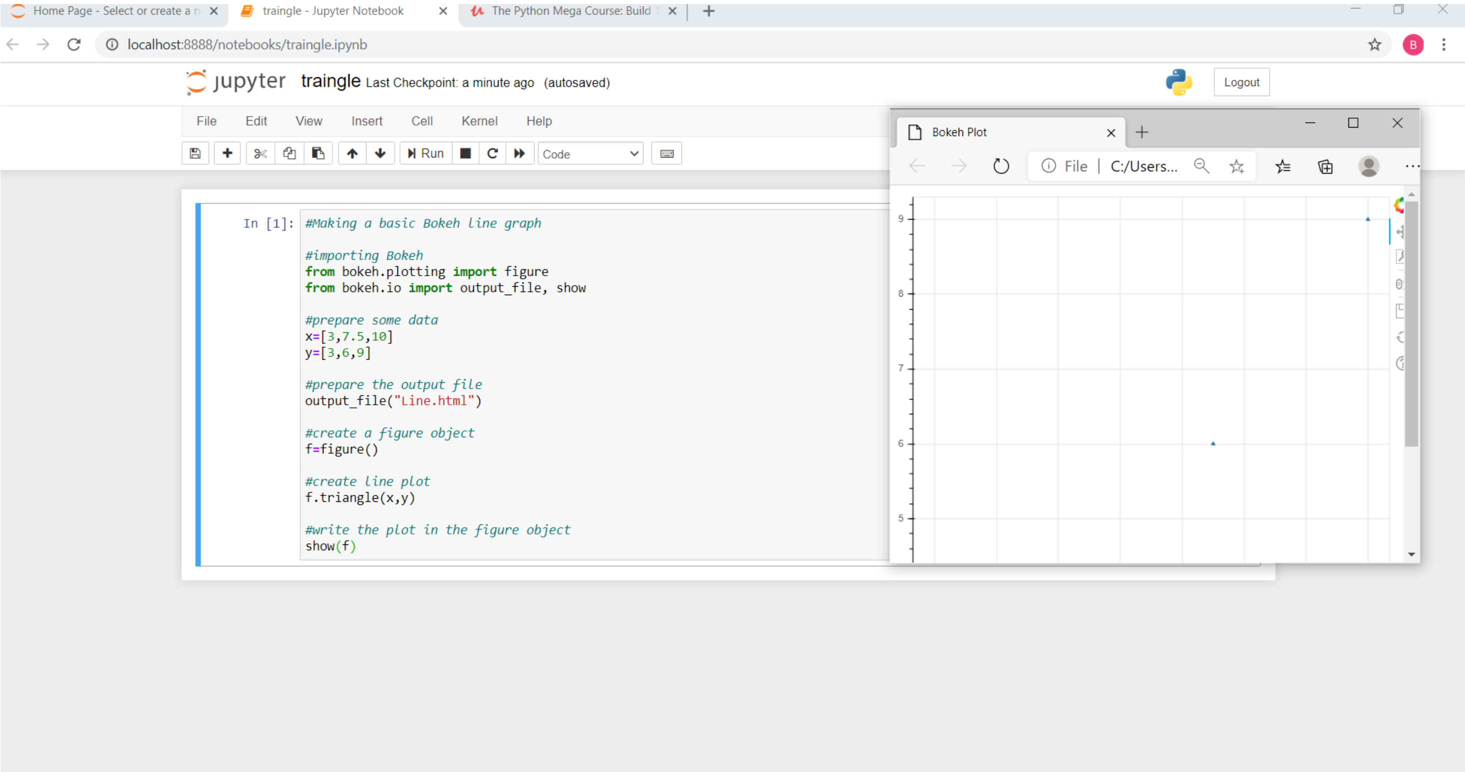
Python excersise program:in(jupyter notebook) using bokeh

1)basic line graph


The Python Mega Course: Bu
Home Page - Select or create a n
basic graph - Jupyter Notebook
localhost:8888/notebooks/basic%20graph.ipynb
jupyter basic graph Last Checkpoint: 6 minutes ago (autosaved)
Logout
File Edit View Insert Cell Kernel Help
Run
Code
Bokeh Plot
File | C:/Users/...
10
9
8
In [1]:

```
from bokeh.plotting import figure
from bokeh.io import output_file,show

#prepare some data
x=[1,2,3,4,5]
y=[6,7,8,9,10]

#prepare the output file
output_file("Line.html")

#create a figure object
f=figure()

#create line plot

f.line(x,y)

show(f)
```

2)triangle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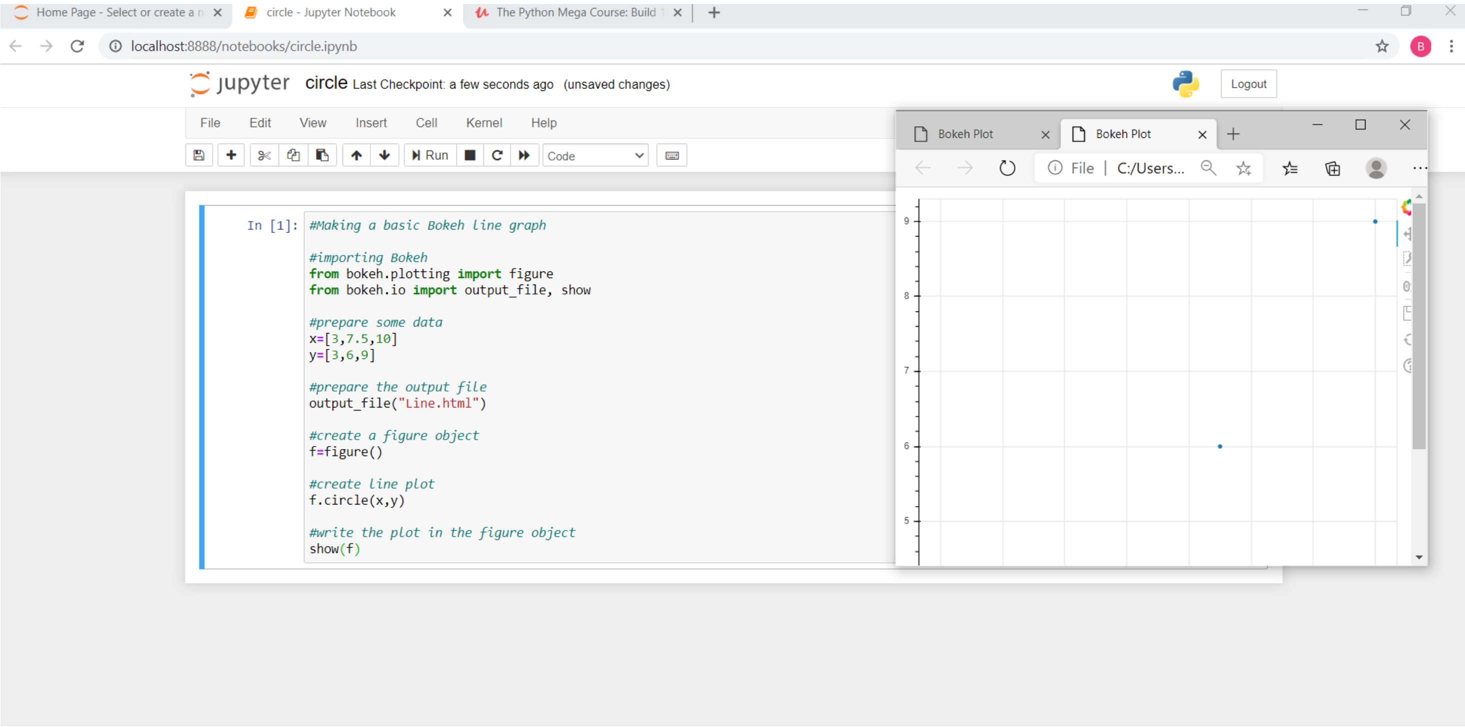
traingle - Jupyter Notebook
The Python Mega Course: Build
localhost:8888/notebooks/traingle.ipynb
jupyter traingle Last Checkpoint: a minute ago (autosaved)
Logout
File Edit View Insert Cell Kernel Help
Run
Code
Bokeh Plot
File | C:/Users...
9
8
7
6
5
In [1]:

```
#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=[3,6,9]

#prepare the output file
output_file("Line.html")

#create a figure object
f=figure()

#create line plot
f.triangle(x,y)

#write the plot in the figure object
show(f)
```

3)circle



Home Page - Select or create a n
circle - Jupyter Notebook
The Python Mega Course: Build
localhost:8888/notebooks/circle.ipynb
jupyter circle Last Checkpoint: a few seconds ago (unsaved changes)
Logout
File
Edit
View
Insert
Cell
Kernel
Help
Run
Code
Bokeh Plot
Bokeh Plot
File | C:/Users...
9
8
7
6
5

In [1]:

```
#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=[3,6,9]

#prepare the output file
output_file("Line.html")

#create a figure object
f=figure()

#create line plot
f.circle(x,y)

#write the plot in the figure object
show(f)
```