OMOTEC

ON MY OWN TECHNOLOGY

SESSION - 5
MULTI LAYER GRAPH

Learning Outcomes:

- **Remember**: The students will recall about Coordinate System .
- **Understand**:   They will focus on understanding :

  - Different types of graph

  - Multi layer representation

  - Data Handling

- **Apply**: They will learn to apply the Library - pygal to generate graphs in the output .
- **Analyze**: They will check their understanding by developing a code .
- **Create**: They will create the code in EduBlocks

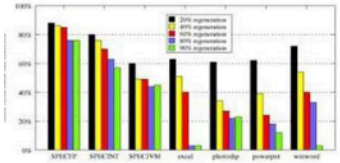
Remember & Understanding

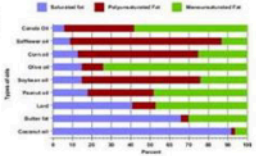
MULTI-LAYER GRAPH

In Multilevel Graph, each layer of the graph is a subset of the original network (nodes and intra-edges)

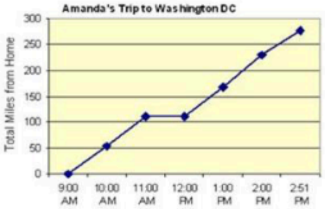
The inter-edges only connect the same nodes on different layers.

-BAR GRAPHS

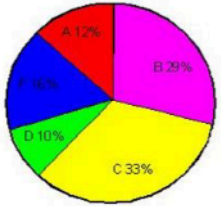




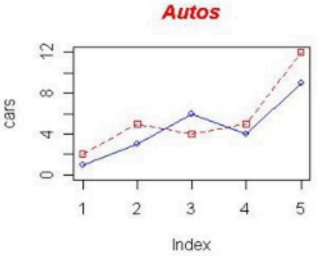
-LINE GRAPHS



-PIE CHARTS



Product Y
$12,000
$30,000
$23,000
17,000
$21,000
$30,000

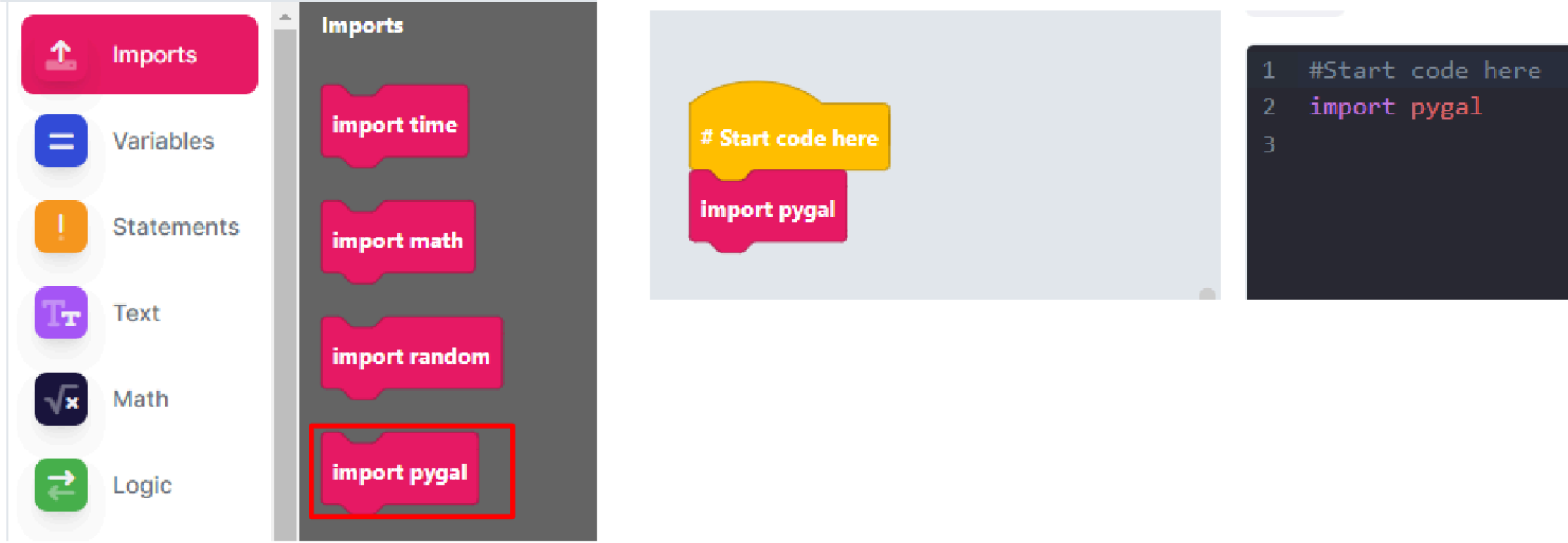


Apply & Create

TASK 01:-

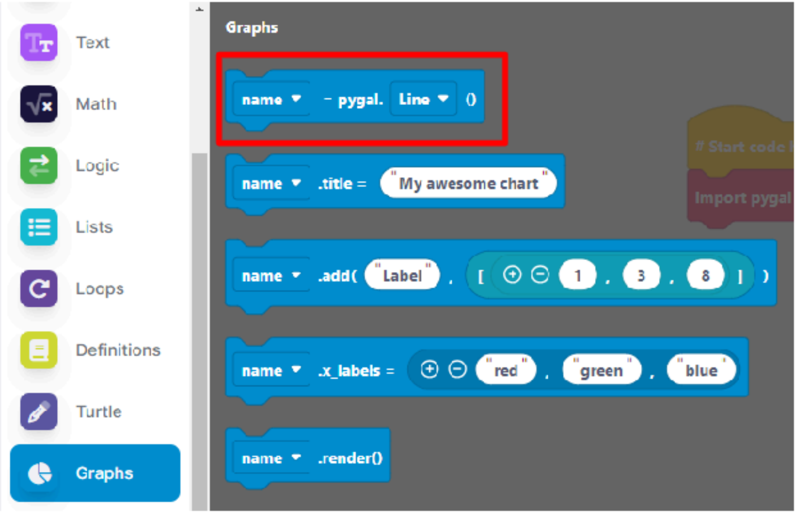
</> WRITE A CODE TO CREATE A LINE GRAPH

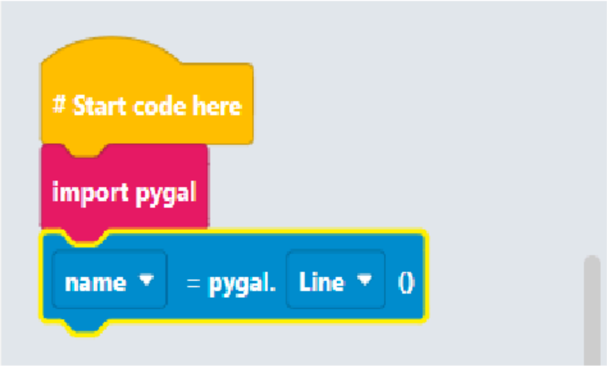
Program

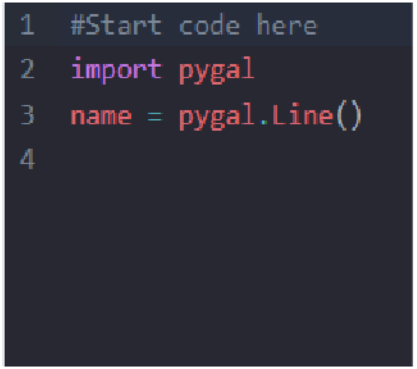


```
#Start code here
import pygal

```

Program

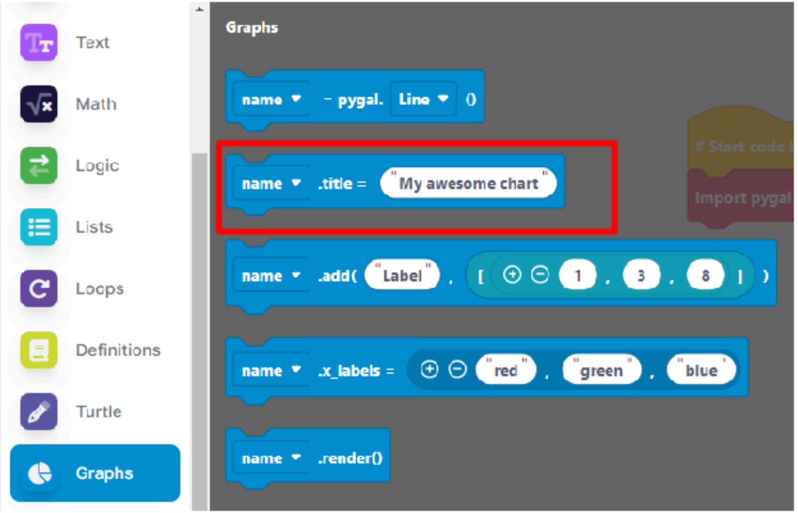

Text
Math
Logic
Lists
Loops
Definitions
Turtle
Graphs
Graphs
name ▾ = pygal. Line ▾ ()
name ▾ .title = "My awesome chart"
name ▾ .add("Label" , [⊕ ⊖ 1 , 3 , 8])
name ▾ .x_labels = ⊕ ⊖ "red" , "green" , "blue"
name ▾ .render()
# Start code
import pygal

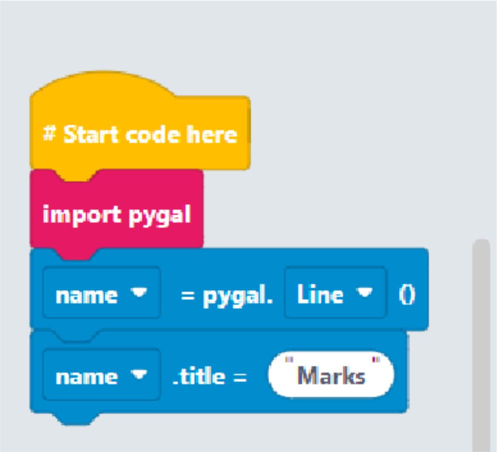


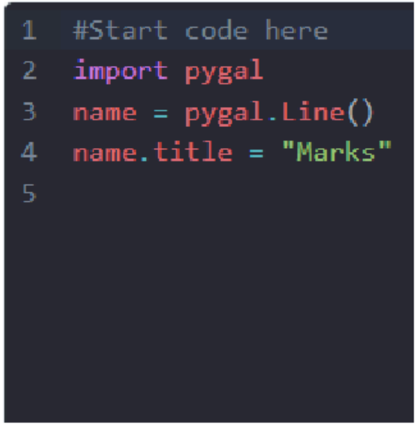


```
#Start code here
import pygal
name = pygal.Line()

```

Program

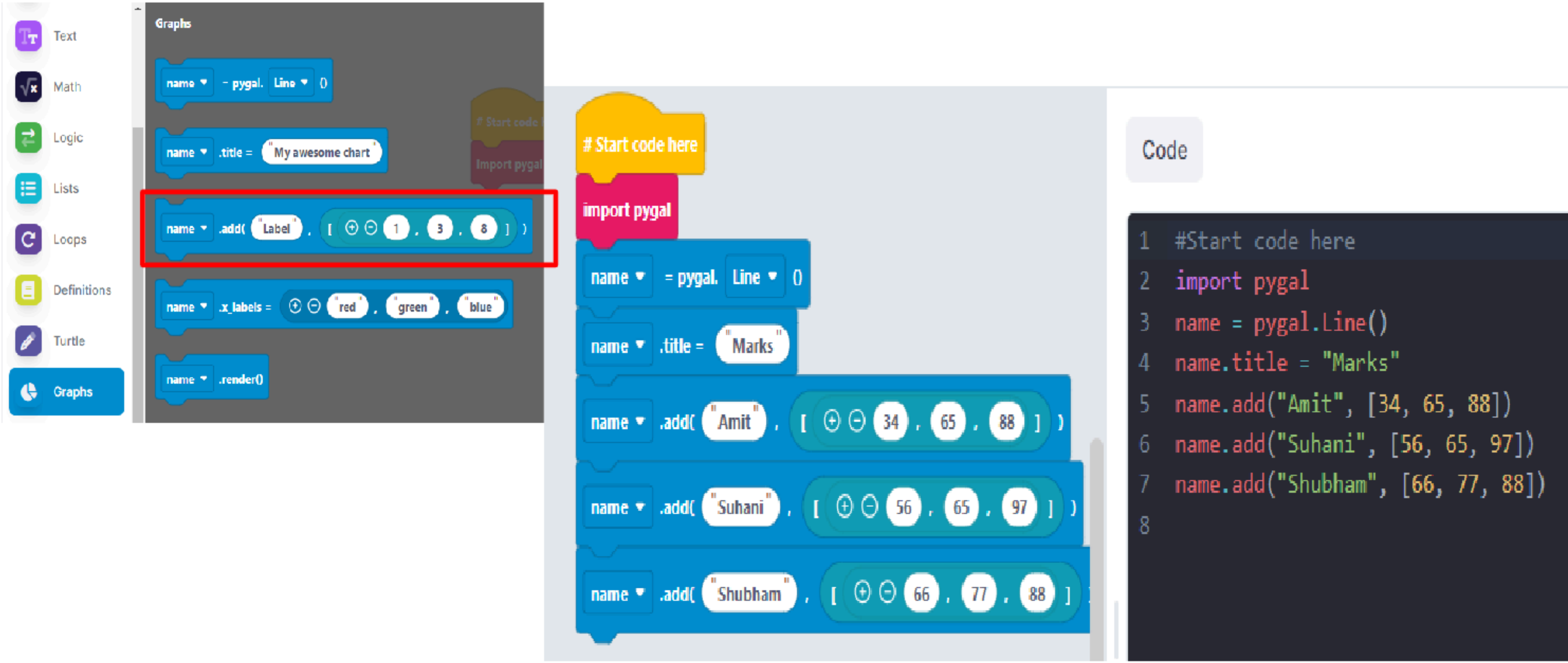






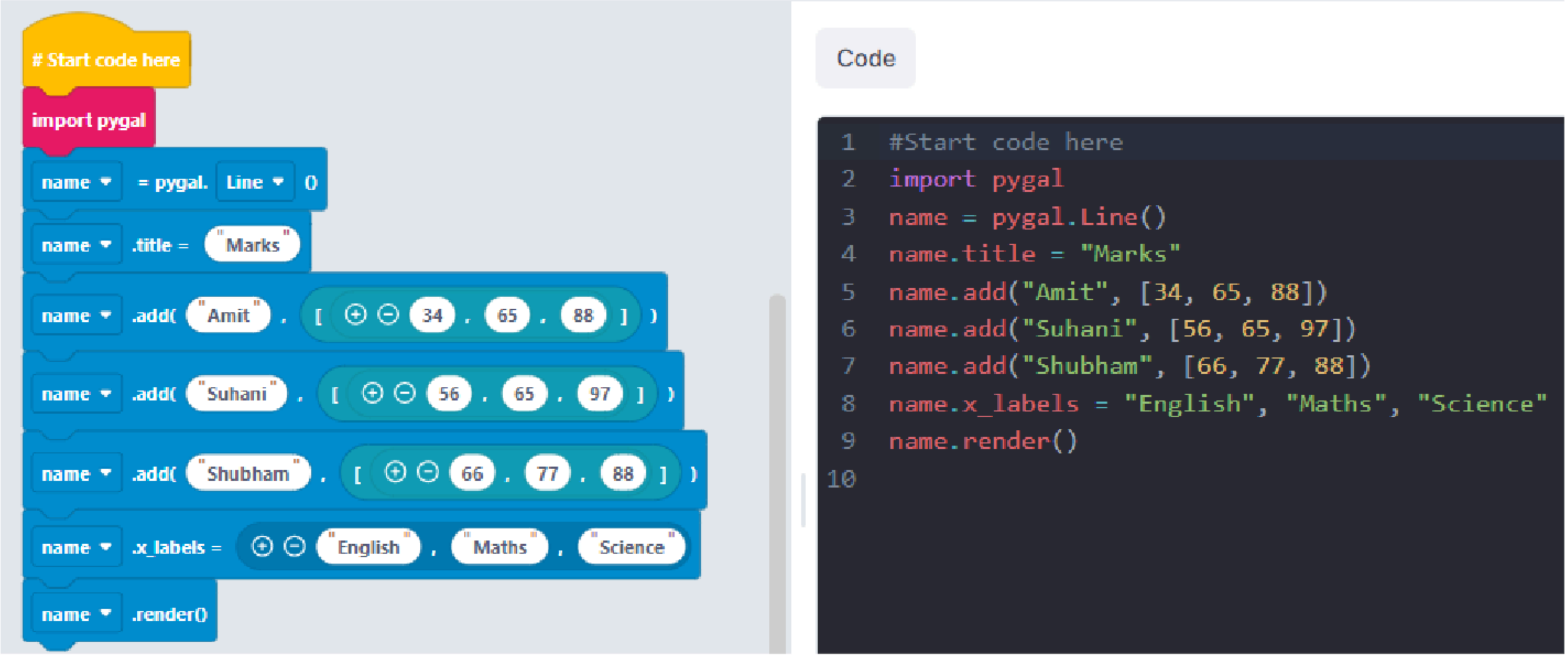
```
#Start code here
import pygal
name = pygal.Line()
name.title = "Marks"
```

Program


Text
Math
Logic
Lists
Loops
Definitions
Turtle
Graphs
Graphs
name = pygal. Line ()
name .title = "My awesome chart"
name .add("Label" , [1 , 3 , 8])
name .x_labels = "red" , "green" , "blue"
name .render()
# Start code here
import pygal
name = pygal. Line ()
name .title = "Marks"
name .add("Amit" , [34 , 65 , 88])
name .add("Suhani" , [56 , 65 , 97])
name .add("Shubham" , [66 , 77 , 88]
Code

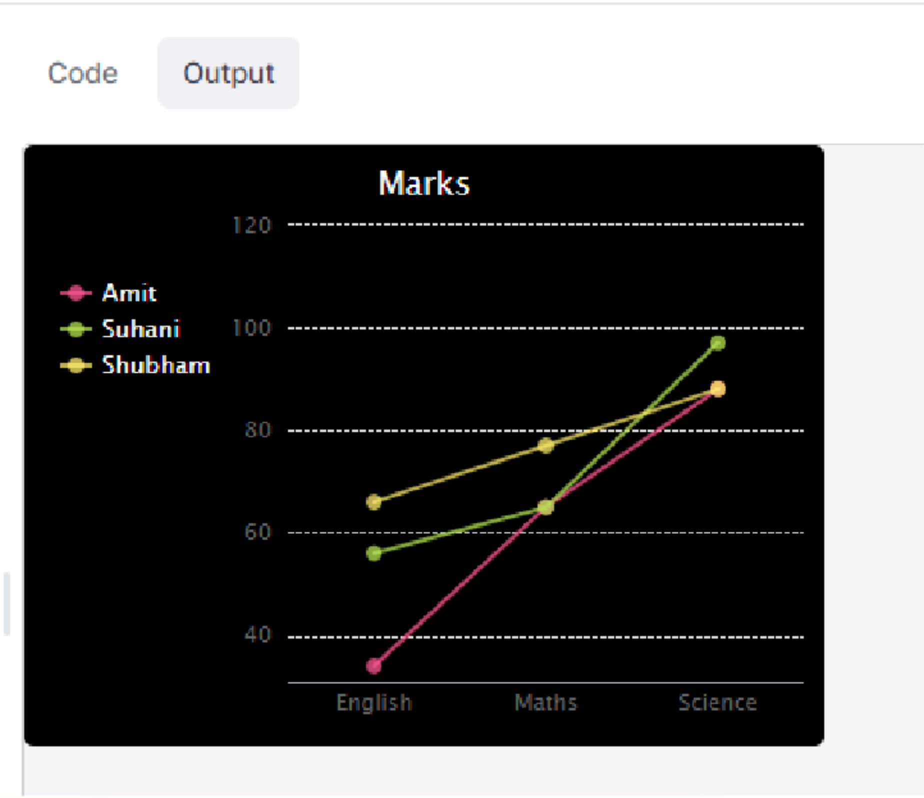
```
#Start code here
import pygal
name = pygal.Line()
name.title = "Marks"
name.add("Amit", [34, 65, 88])
name.add("Suhani", [56, 65, 97])
name.add("Shubham", [66, 77, 88])

```

Program



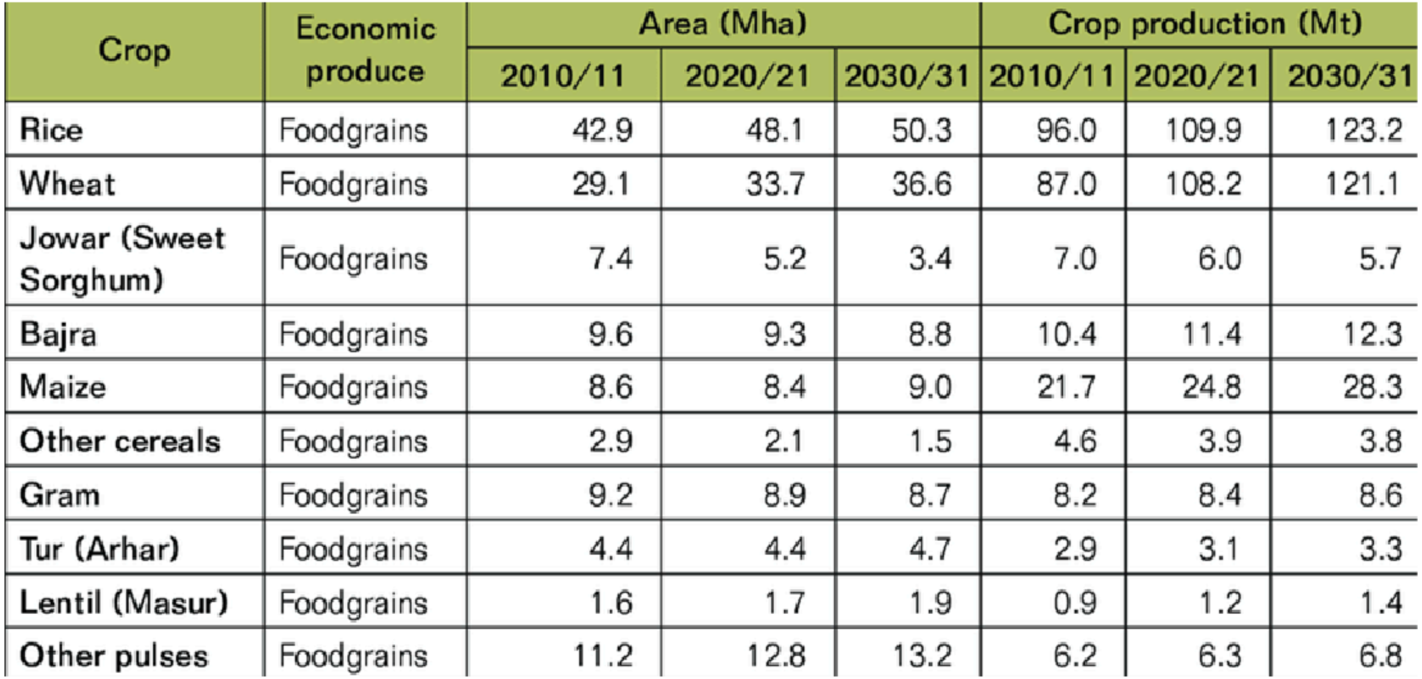
```
#Start code here
import pygal
name = pygal.Line()
name.title = "Marks"
name.add("Amit", [34, 65, 88])
name.add("Suhani", [56, 65, 97])
name.add("Shubham", [66, 77, 88])
name.x_labels = "English", "Maths", "Science"
name.render()
```

Output


Code
Output
Marks
Amit
Suhani
Shubham
120
100
80
60
40
English
Maths
Science

Homework

Plot the graph for the following data



Crop	Economic produce	Area (Mha)			Crop production (Mt)		
		2010/11	2020/21	2030/31	2010/11	2020/21	2030/31
Rice	Foodgrains	42.9	48.1	50.3	96.0	109.9	123.2
Wheat	Foodgrains	29.1	33.7	36.6	87.0	108.2	121.1
Jowar (Sweet Sorghum)	Foodgrains	7.4	5.2	3.4	7.0	6.0	5.7
Bajra	Foodgrains	9.6	9.3	8.8	10.4	11.4	12.3
Maize	Foodgrains	8.6	8.4	9.0	21.7	24.8	28.3
Other cereals	Foodgrains	2.9	2.1	1.5	4.6	3.9	3.8
Gram	Foodgrains	9.2	8.9	8.7	8.2	8.4	8.6
Tur (Arhar)	Foodgrains	4.4	4.4	4.7	2.9	3.1	3.3
Lentil (Masur)	Foodgrains	1.6	1.7	1.9	0.9	1.2	1.4
Other pulses	Foodgrains	11.2	12.8	13.2	6.2	6.3	6.8