

(\*Note: This is not real data and used purely for practice\*)

```
In[*]:= data = {
  {"A", "North", 250, 50},
  {"B", "South", 150, 30},
  {"C", "East", 200, 40},
  {"D", "West", 300, 60},
  {"E", "North", 270, 55},
  {"F", "East", 220, 45},
  {"G", "South", 180, 35},
  {"H", "West", 310, 65}
};
keys = {"Product", "Region", "Sales", "Profit"};

In[*]:= tab = Tabular[data, keys]
```

Out[\*]=

	Product	Region	Sales	Profit	▲
1	A	North	250	50	
2	B	South	150	30	
3	C	East	200	40	
4	D	West	300	60	
5	E	North	270	55	
6	F	East	220	45	
7	G	South	180	35	▼

```
In[*]:= ColumnKeys[tab]
```

```
Out[*]=
{Product, Region, Sales, Profit}
```

```
In[*]:= totalSales = Total[tab[[All, "Sales"]]]
totalProfit = Total[tab[[All, "Profit"]]]
```

```
Out[*]=
1880
```

```
Out[*]=
380
```

```
In[*]:= averageSalesByRegion =
AggregateRows[tab, "averageSales" → Function[Mean[#Sales]], "Region"]
```

```
Out[*]=
```

Region	averageSales
North	260.00
South	165.00
East	210.00
West	305.00

```
In[*]:= highProfitProducts = Select[tab, #Profit > 50 &]
```

```
Out[*]=
```

	Product	Region	Sales	Profit
1	D	West	300	60
2	E	North	270	55
3	H	West	310	65

```
In[*]:= sales = Normal[tab[[All, "Sales"]]];
products = Normal[tab[[All, "Product"]]];
```

```
In[*]:= BarChart[tab → "Sales", ChartLabels → products, ChartStyle → LightBlue,
AxesLabel → {"Product", "Sales"}, PlotLabel → "Sales by Product"]
```

```
Out[*]=
```



In[ ]:=

```
BarChart[
  tab → "Sales", ChartLabels → products, ChartStyle → (If[# < 200, Red, Green] & /@ sales),
  AxesLabel → {"Product", "Sales"}, PlotLabel → "Sales by Product"
]
```

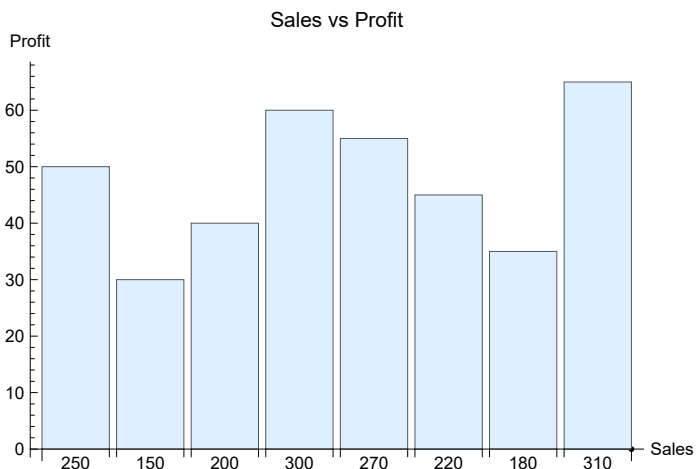
Out[ ]:=



In[ ]:=

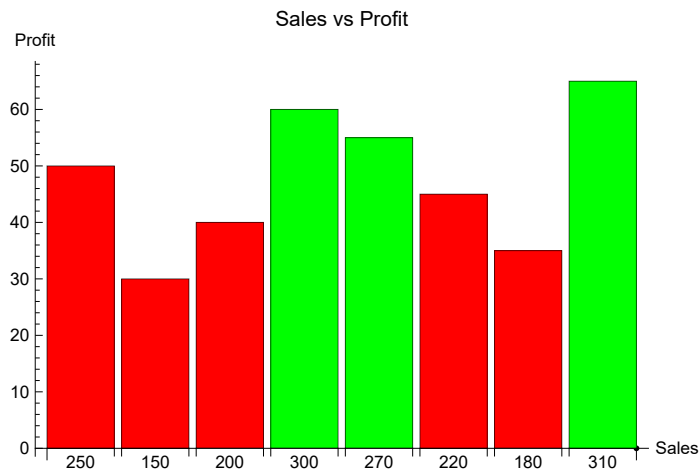
```
profit = Normal[tab[[All, "Profit"]]];
BarChart[tab → "Profit", ChartLabels → sales, ChartStyle → LightBlue,
  AxesLabel → {"Sales", "Profit"}, PlotLabel → "Sales vs Profit"]
```

Out[ ]:=



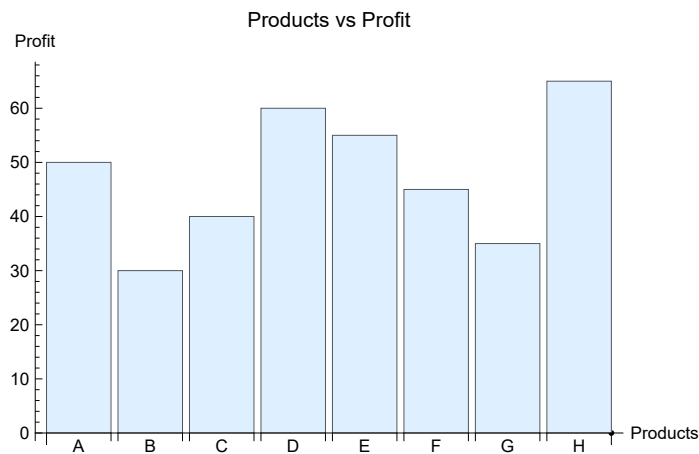
```
In[ ]:= BarChart[tab → "Profit", ChartLabels → sales,
  ChartStyle → (If[# > 50, Green, Red] & /@ profit),
  AxesLabel → {"Sales", "Profit"}, PlotLabel → "Sales vs Profit"]
```

Out[ ]:=



```
In[ ]:= BarChart[tab → "Profit", ChartLabels → products, ChartStyle → LightBlue,
  AxesLabel → {"Products", "Profit"}, PlotLabel → "Products vs Profit"]
```

Out[ ]:=



```
In[ ]:= BarChart[tab → "Profit", ChartLabels → products,
  ChartStyle → (If[# > 50, Green, Red] & /@ profit),
  AxesLabel → {"Products", "Profit"}, PlotLabel → "Product vs Profit"]
```

Out[ ]:=

