

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

```
In[*]:= data = {  
  {"Product", "Region", "Sales", "Profit"},  
  {"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}  
};
```

```
In[*]:= Tabular[data]
```

Out[\*]=

	1	2	3	4	
	Product	Region	Sales	Profit	
2	A	North	250	50	
3	B	South	150	30	
4	C	East	200	40	
5	D	West	300	60	
6	E	North	270	55	
7	F	East	220	45	
8	G	South	180	35	
9	H	West	310	65	

```
In[*]:= totalSales = Total[Rest[data][[All, 3]]]  
totalProfit = Total[Rest[data][[All, 4]]]
```

Out[\*]=

1880

Out[\*]=

380

```
In[*]:= avgSalesByRegion = GroupBy[Rest[data], #[[2]] & → Mean[#[[3]] &]
```

Out[\*]=

```
<| North → {Mean[#[[3]] &][{A, North, 250, 50}], Mean[#[[3]] &][{E, North, 270, 55}]},  
  South → {Mean[#[[3]] &][{B, South, 150, 30}], Mean[#[[3]] &][{G, South, 180, 35}]},  
  East → {Mean[#[[3]] &][{C, East, 200, 40}], Mean[#[[3]] &][{F, East, 220, 45}]},  
  West → {Mean[#[[3]] &][{D, West, 300, 60}], Mean[#[[3]] &][{H, West, 310, 65}]} |>
```

```
In[ ]:= highProfitProducts = Select[Rest[data], #[[4]] > 50 &];
Tabular[Prepend[highProfitProducts, First[data]]]
```

Out[ ]:=

	1	2	3	4
1	Product	Region	Sales	Profit
2	D	West	300	60
3	E	North	270	55
4	H	West	310	65

```
In[ ]:= products = Rest[data][[All, 1]];
sales = Rest[data][[All, 3]];
BarChart[sales, ChartLabels → products, ChartStyle → LightBlue,
  AxesLabel → {"Product", "Sales"}, PlotLabel → "Sales by Product"]
```

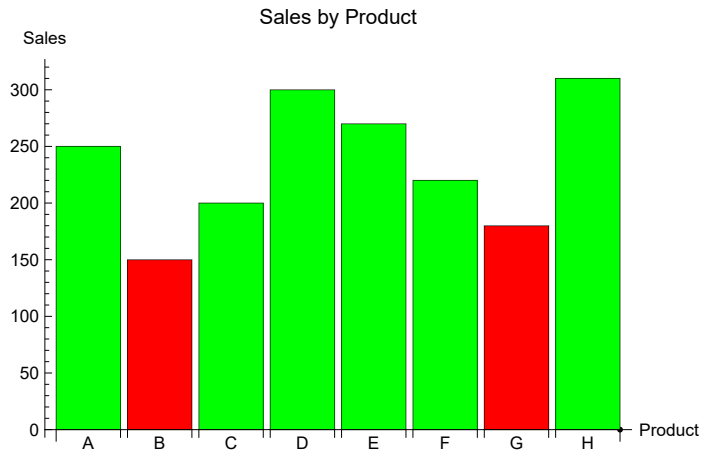
Out[ ]:=



*In[ ]:=*

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

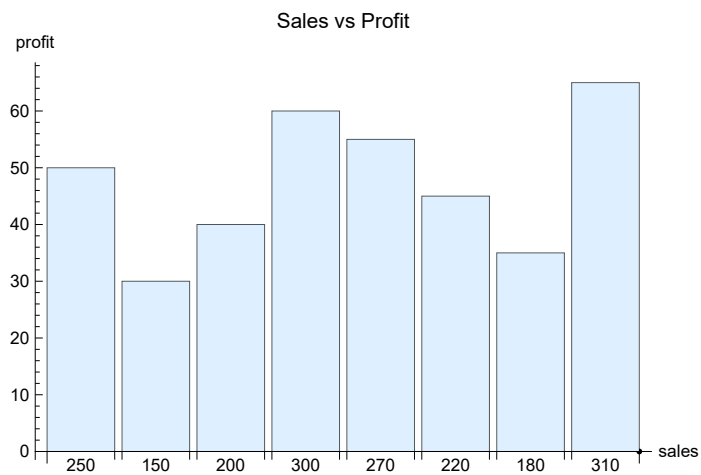
*Out[ ]:=*



*In[ ]:=*

```
sales = Rest[data] [[All, 3]];
profit = Rest[data] [[All, 4]];
BarChart[profit, ChartLabels → sales, ChartStyle → LightBlue,
  AxesLabel → {"sales", "profit"}, PlotLabel → "Sales vs Profit"]
```

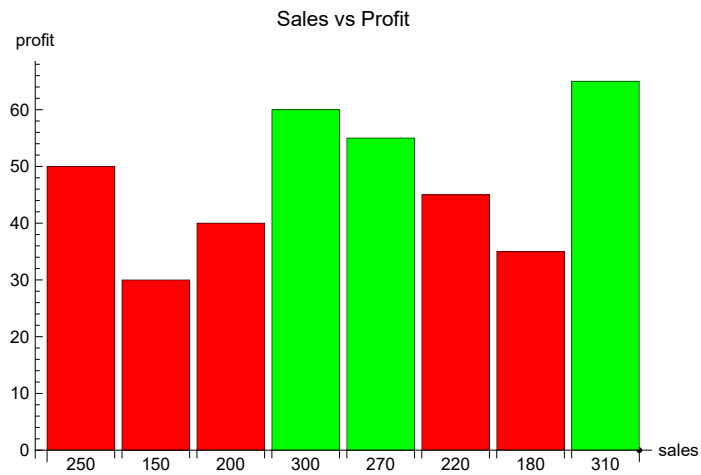
*Out[ ]:=*



In[ ]:=

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

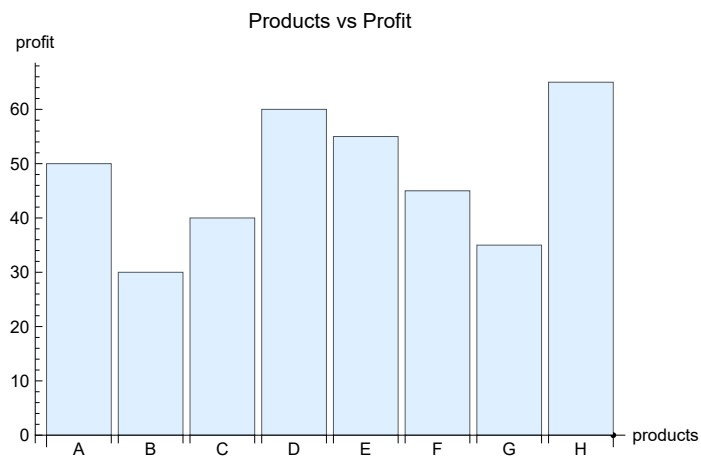
Out[ ]:=



In[ ]:=

```
products = Rest[data][[All, 1]];  
profit = Rest[data][[All, 4]];  
BarChart[profit, ChartLabels → products, ChartStyle → LightBlue,  
  AxesLabel → {"products", "profit"}, PlotLabel → "Products vs Profit"]
```

Out[ ]:=



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

Out[ ]=

