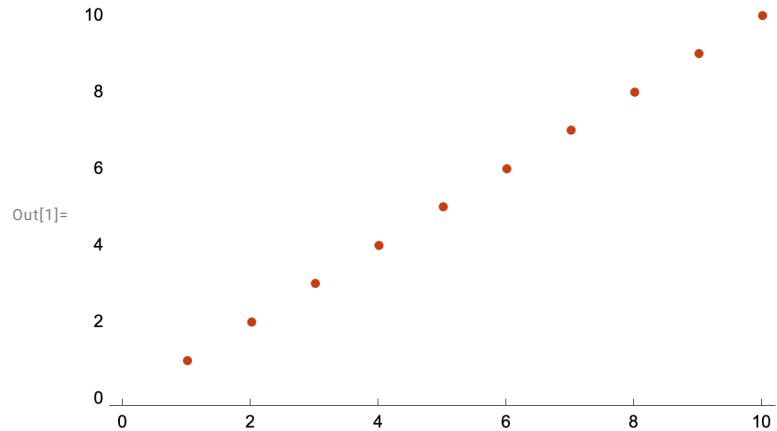


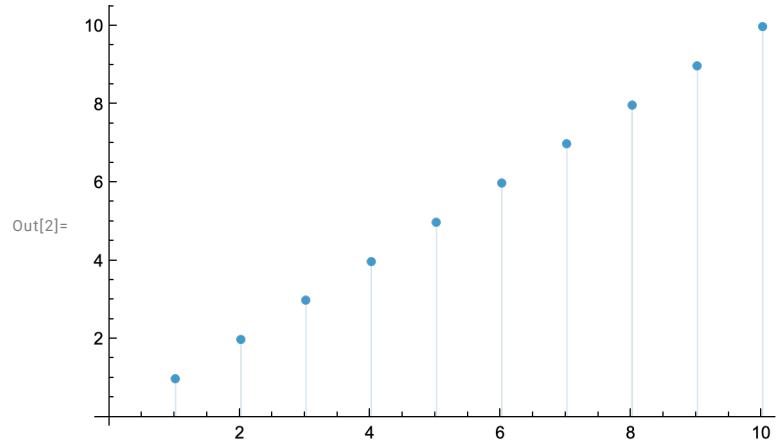
Walker's Problem Set 8

Chapter 20

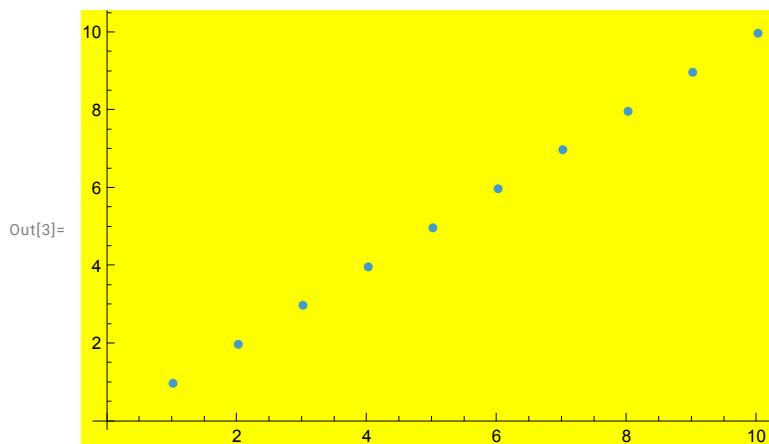
```
In[1]:= ListPlot[Range[10], PlotTheme -> "Web"]
```



```
In[2]:= ListPlot[Range[10], Filling -> Axis]
```



```
In[3]:= ListPlot[Range[10], Background -> Yellow]
```



```
GeoListPlot[Australia COUNTRY ..., , GeoRange -> All]
```

Out[4]=



```
In[5]:= GeoListPlot[Madagascar COUNTRY ..., , GeoRange -> Indian Ocean OCEAN ..., ]
```

Out[5]=



In[6]:= **GeoImage** [South America COUNTRIES , "ReliefMap"]



```
In[7]:= GeoListPlot[{France COUNTRY, Finland COUNTRY, Greece COUNTRY}, GeoLabels → True]
```



```
Out[7]=
```

In[8]:= `GeoListPlot[The Ivy League UNIVERSITIES, GeoLabels → True]`



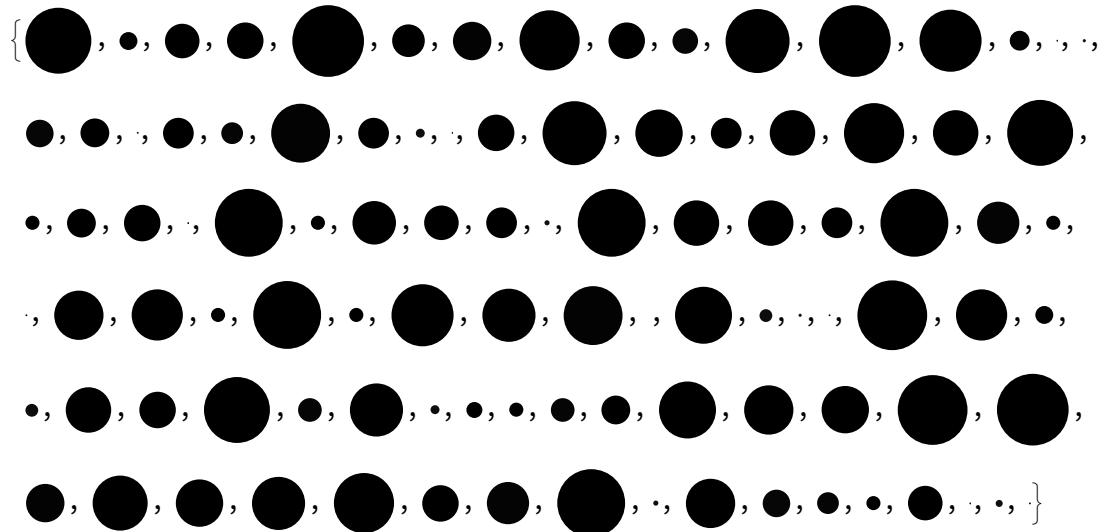
Out[8]= `Style[Grid[Table[x * y, {x, 12}, {y, 12}], Background → Black], White]`

1	2	3	4	5	6	7	8	9	10	11	12
2	4	6	8	10	12	14	16	18	20	22	24
3	6	9	12	15	18	21	24	27	30	33	36
4	8	12	16	20	24	28	32	36	40	44	48
5	10	15	20	25	30	35	40	45	50	55	60
6	12	18	24	30	36	42	48	54	60	66	72
7	14	21	28	35	42	49	56	63	70	77	84
8	16	24	32	40	48	56	64	72	80	88	96
9	18	27	36	45	54	63	72	81	90	99	108
10	20	30	40	50	60	70	80	90	100	110	120
11	22	33	44	55	66	77	88	99	110	121	132
12	24	36	48	60	72	84	96	108	120	132	144

Out[9]=

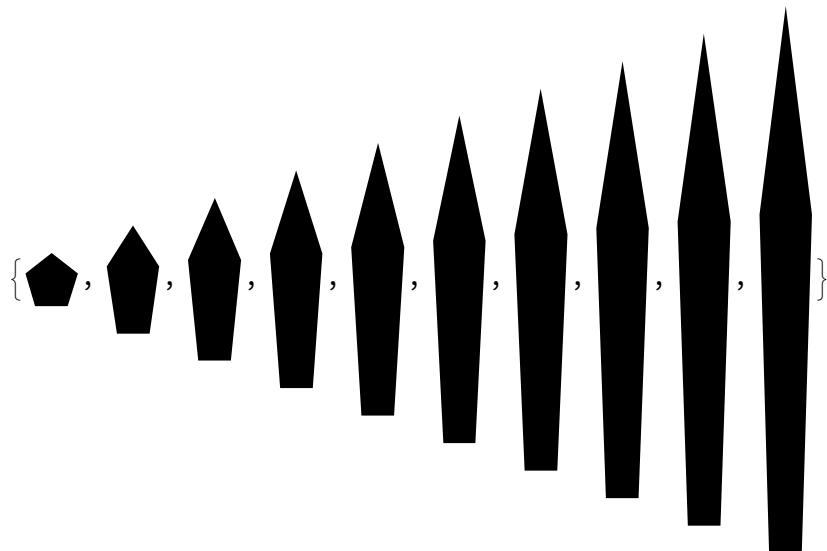
```
In[10]:= Table[Graphics[Disk[], ImageSize -> RandomInteger[40]], 100]
```

Out[10]=



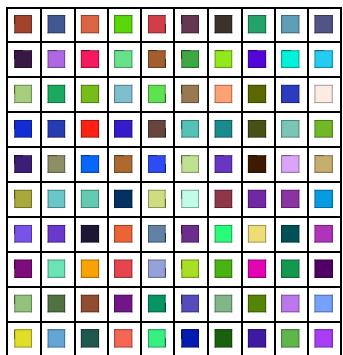
```
In[11]:= Table[Graphics[RegularPolygon[5], ImageSize -> 30, AspectRatio -> n], {n, 10}]
```

Out[11]=



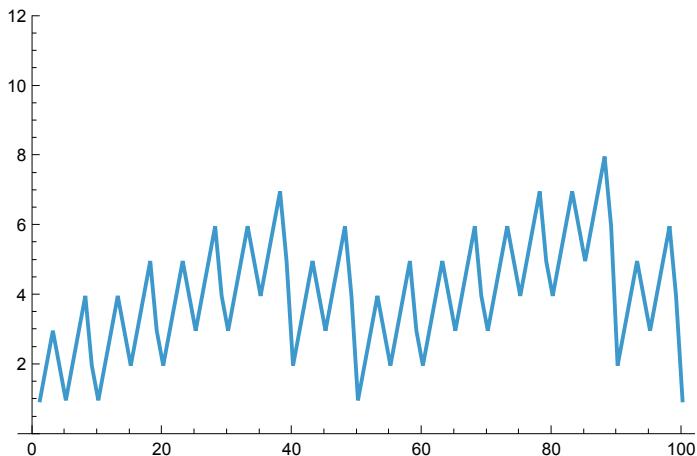
```
In[12]:= Grid[Table[RandomColor[], 10, 10], Frame -> All]
```

```
Out[12]=
```



```
In[13]:= ListLinePlot[StringLength[RomanNumeral[Range[100]]],  
PlotRange -> Max[StringLength[RomanNumeral[Range[1000]]]]]
```

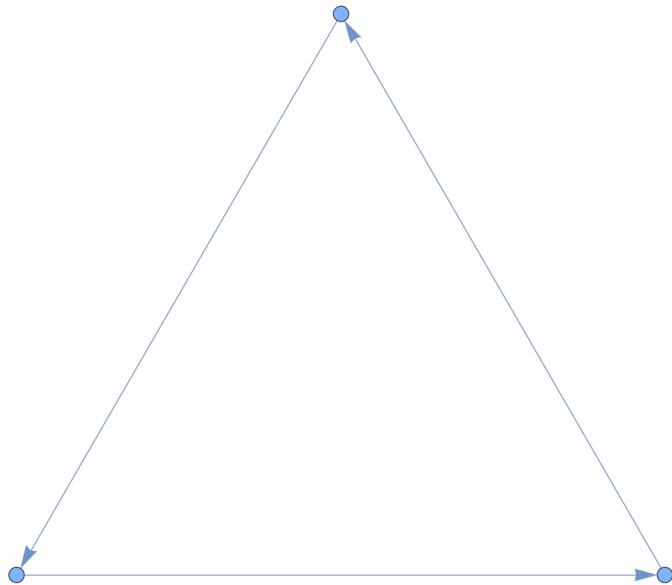
```
Out[13]=
```



Chapter 21

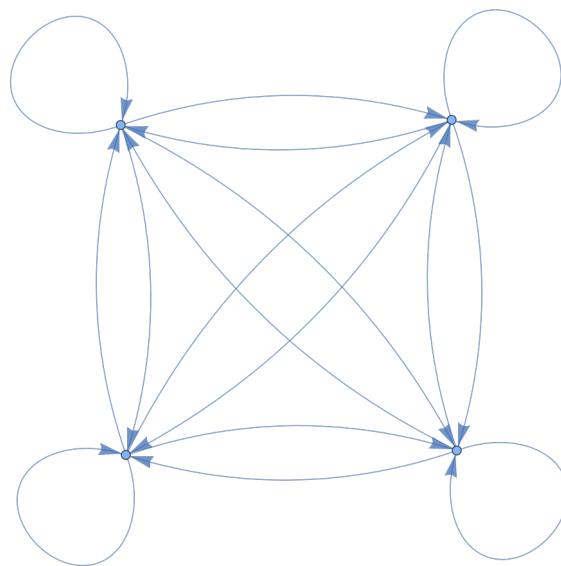
```
In[14]:= Graph[{1 → 2, 2 → 3, 3 → 1}]
```

```
Out[14]=
```

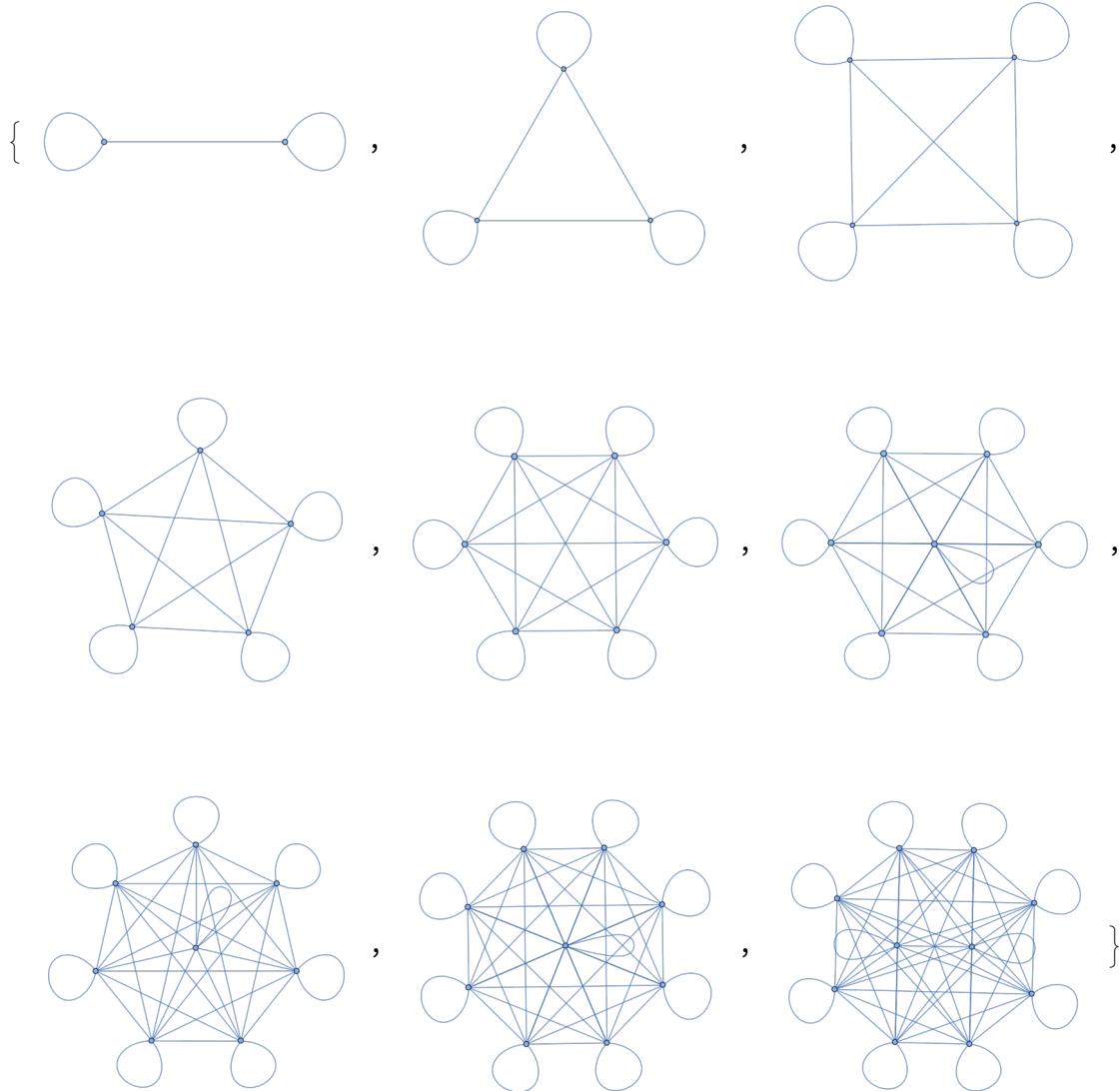


```
In[15]:= Graph[Flatten[Table[x → y, {x, 4}, {y, 4}]]]
```

```
Out[15]=
```



```
In[16]:= Table[UndirectedGraph[Flatten[Table[x → y, {x, n}, {y, n}]]], {n, 2, 10, 1}]  
Out[16]=
```

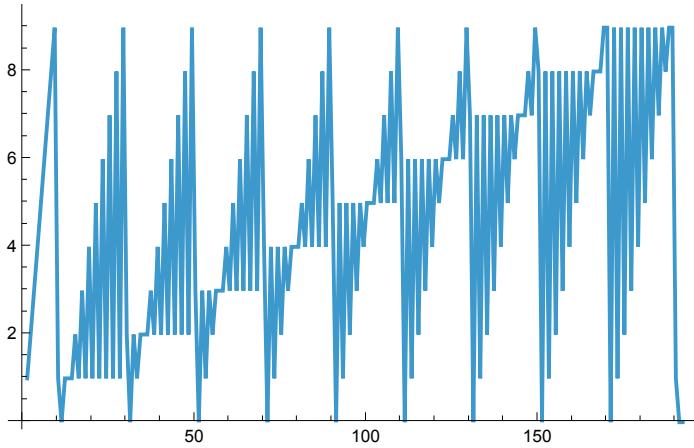


```
In[17]:= Flatten[Table[Range[2], 3]]
```

```
Out[17]= {1, 2, 1, 2, 1, 2}
```

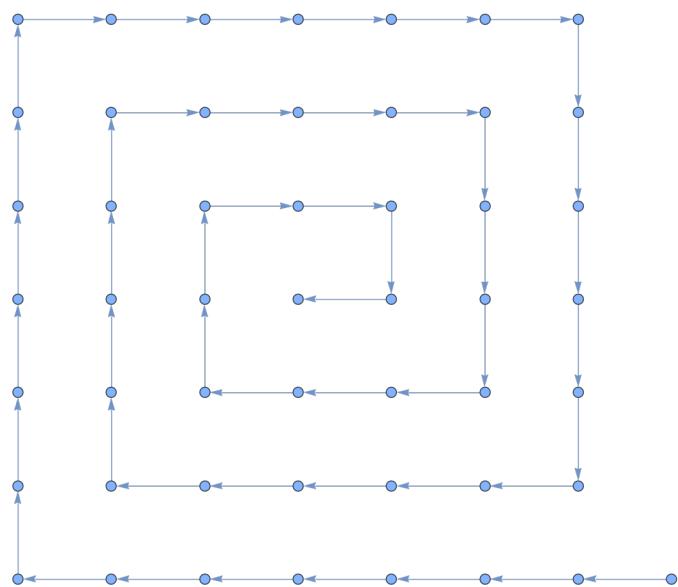
```
In[18]:= ListLinePlot[Flatten[IntegerDigits[Range[100]]]]
```

```
Out[18]=
```

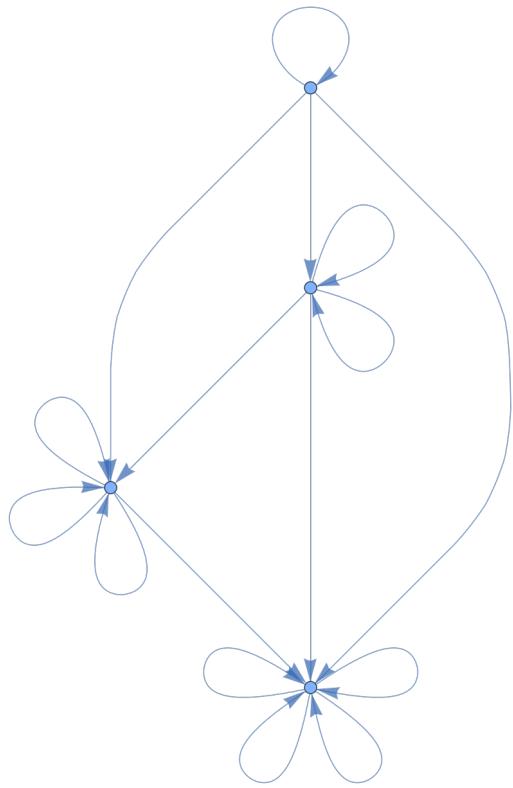


```
In[19]:= Graph[Flatten[Table[n \[Rule] n + 1, {n, 49}]]]
```

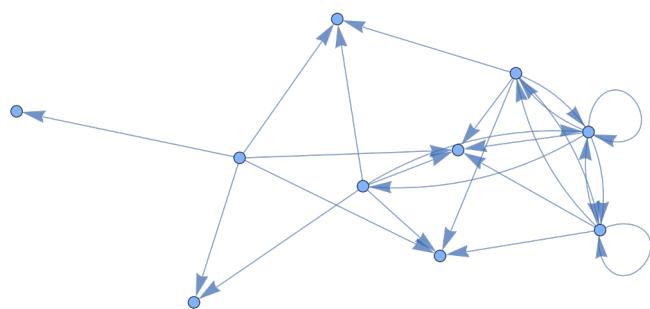
```
Out[19]=
```



```
In[20]:= Graph[Flatten[Table[n → Max[n, j], {n, 4}, {j, 4}]]]  
Out[20]=
```

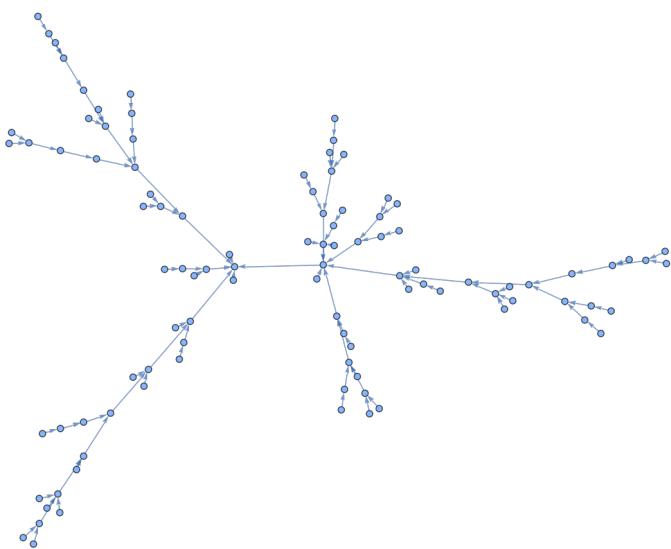


```
In[21]:= Graph[Flatten[Table[i → (j - i), {i, 5}, {j, 5}]]]  
Out[21]=
```



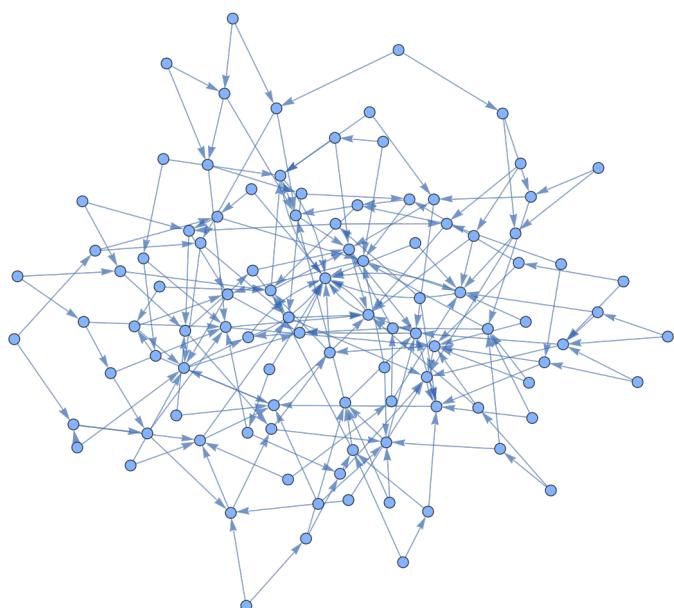
```
In[22]:= Graph[Flatten[Table[n → RandomInteger[n - 1], {n, 100}]]]
```

Out[22]=



```
In[23]:= Graph[Flatten[Table[Table[n → RandomInteger[n - 1], {n, 100}], 2]]]
```

Out[23]=



```
In[24]:= Grid[Table[FindShortestPath[
  Graph[{1 → 2, 2 → 3, 3 → 4, 4 → 1, 3 → 1, 2 → 2}], a, b], {a, 4}, {b, 4}]]
```

Out[24]=

{1}	{1, 2}	{1, 2, 3}	{1, 2, 3, 4}
{2, 3, 1}	{2}	{2, 3}	{2, 3, 4}
{3, 1}	{3, 1, 2}	{3}	{3, 4}
{4, 1}	{4, 1, 2}	{4, 1, 2, 3}	{4}

Chapter 22

```
In[25]:= LanguageIdentify["ajatella"]
Out[25]= Finnish

ImageIdentify@EntityValue[tiger SPECIES SPECIFICATION ..., "Image"]

Out[26]= tiger

ImageIdentify[
  Table[Blur@EntityValue[tiger SPECIES SPECIFICATION ..., "Image"], n], {n, 1, 5}]

Out[27]= {tiger, tiger, tiger, tiger, swift fox}

In[28]:= Classify["Sentiment", "I'm so happy to be here"]
Out[28]= Positive

In[29]:= Nearest[WordList[], "happy", 10]
Out[29]= {happy, haply, harpy, nappy, sappy, apply, campy, choppy, guppy, hairy}

In[30]:= Nearest[Table[RandomInteger[1000], 20], 100, 3]
Out[30]= {96, 66, 167}

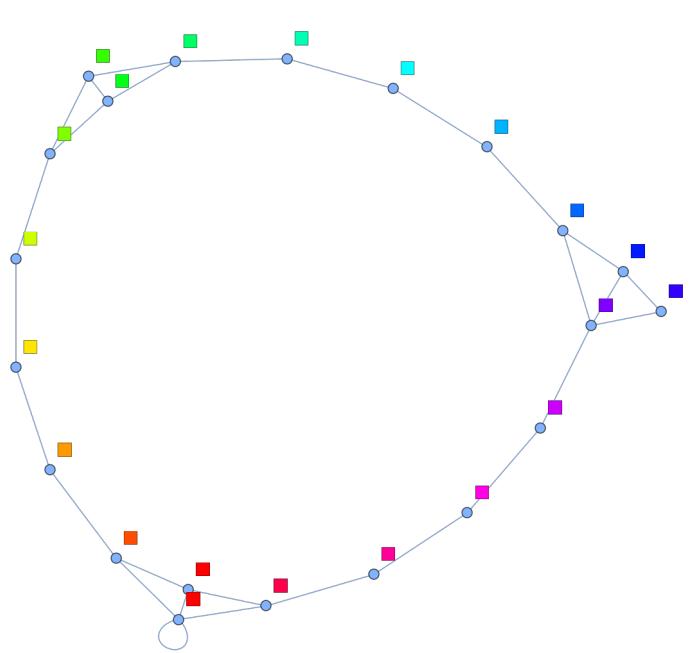
In[31]:= Nearest[Table[RandomColor[], 10], Red, 5]
Out[31]= {■, ■, ■, ■, ■}

In[32]:= Nearest[Table[n^2, {n, 2000}], 2000]
Out[32]= {2025}

In[33]:= Nearest@EntityValue@EntityList[Europe COUNTRIES ..., "Flag"],
  EntityValue[Brazil COUNTRY ..., "Flag"], 3]
Out[33]= {, , }
```

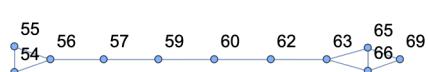
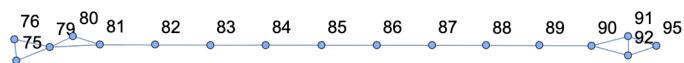
```
In[34]:= NearestNeighborGraph[Table[Hue[h], {h, 0, 1, .05}], 2, VertexLabels → All]
```

Out[34]=



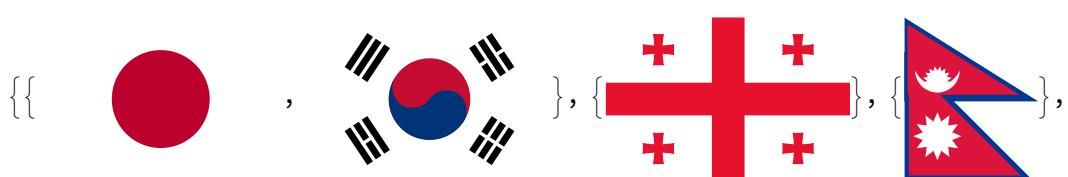
```
In[35]:= NearestNeighborGraph[Table[RandomInteger[100], 100], 2, VertexLabels → All]
```

Out[35]=



```
In[36]:= FindClusters[EntityValue[EntityList[], "Flag"]]
```

Out[36]=

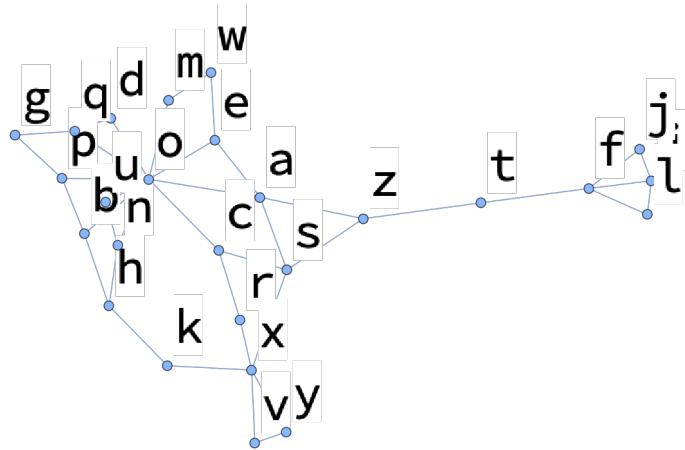






```
In[37]:= NearestNeighborGraph[
Table[Rasterize[Style[Alphabet[][[n]], 20]], {n, 26}], 2, VertexLabels -> All]
```

Out[37]=

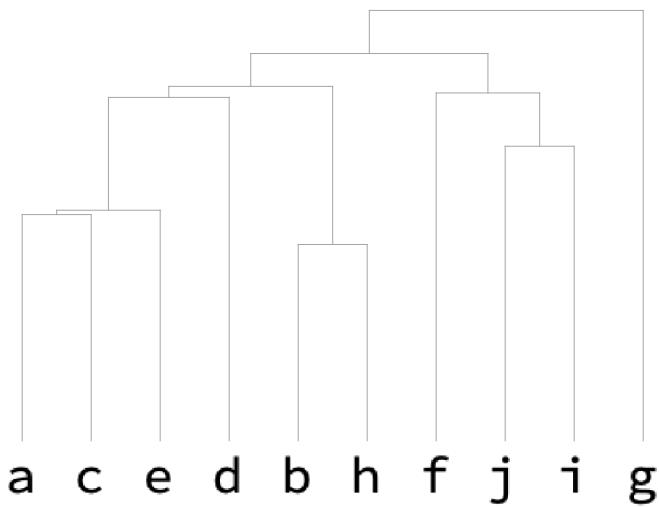
In[38]:= **TextRecognize**[Table[EdgeDetect[Rasterize[Style["programing", n]]], {n, 10, 20, 1}]]

Out[38]=

{programing, programing, programing, programing, programing, programing, programing, programing, programing, programing, programing}

In[39]:= **Dendrogram**[Table[Rasterize[Alphabet[][[n]]], {n, 10}]]

Out[39]=



```
In[40]:= FeatureSpacePlot[Table[Rasterize[ToUpperCase[Alphabet[]][n]], {n, 26}]]  
Out[40]=
```

