

EIWL Sections 45 and 46

8/8

Due to getting a little behind in the final two weeks of the semester, I only checked for completeness on PS 18-21. ~Brian

```
In[ ]:= planets = CloudGet["http://wolfr.am/7FxLgPm5"];
        planets[WordCloud[Association[Values[#]]] &, "Moons", Length]

In[ ]:= BarChart[planets[All, "Moons", Length], ChartLabels → Automatic]

In[ ]:= planets[SortBy[Length[#Moons] &], "Mass"]

In[ ]:= planets[All, "Moons", Max, "Mass"]

In[ ]:= planets[All, "Moons", Total, "Mass"] [Sort]

In[ ]:= planets[All, "Moons", Median, "Mass"]

In[ ]:= planets[All, "Moons", Select[#Mass > Quantity[1 / 10 000, "EarthMass"] &] /* Keys]

In[ ]:= WordCloud[Association[# → StringLength[WikipediaData[#]] & /@
        EntityList[EntityClass["Country", "CentralAmerica"]]]]

In[ ]:= fireballs = ResourceData["Fireballs and Bolides"];
        fireballs[Max, "Altitude"]

In[ ]:= fireballs[TakeLargest[5], "Altitude"]

In[ ]:= Histogram[Differences[Normal[fireballs[All, "PeakBrightness"]]]]

In[ ]:= GeoListPlot[fireballs[Take[1 ;; 10], "NearestCity"], GeoLabels → True]

In[ ]:= GeoListPlot[
        fireballs[TakeLargestBy[#Altitude &, 10], "NearestCity"], GeoLabels → True]

In[ ]:= Spectrogram[SpeechSynthesize[IntegerName[123 456]]]

In[ ]:= Spectrogram[SpeechSynthesize[ToString[Last[SortBy[WordList[], StringLength]]]]]

In[ ]:= SpeechSynthesize[StringRiffle[Alphabet[], " "]]

In[ ]:= Spectrogram[SpeechSynthesize[StringRiffle[Alphabet[], " "]]]

In[ ]:= AudioPitchShift[SpeechSynthesize["hello"], 2]

In[ ]:= Table[SpeechRecognize[AudioPitchShift[SpeechSynthesize["computer"], p]],
        {p, 1, 1.5, 0.1}]
```

```
In[*]:= AudioPlot[Sound[SoundNote[#, 1, "Guitar"] & /@ {0, 12, 24}]]
```

```
In[*]:= Table[AudioIdentify[AudioPitchShift[Sound[SoundNote[0, 1, "Trumpet"]], p]],  
  {p, 0.5, 1, 0.1}]
```

```
In[*]:= AnimationVideo[Blur[, 20 - t], {t, 0, 20}]
```

```
In[*]:= AnimationVideo[Graphics[{Circle[], RegularPolygon[n]}], {n, 3, 20, 1}]
```

```
In[*]:= AnimationVideo[Graphics[Style[Disk[], Hue[x]], ImageSize -> 50], {x, 0, 1}]
```

```
In[*]:= AnimationVideo[  
  Rasterize[Style[ToUpperCase[FromLetterNumber[n]], 200]], {n, 1, 26, 1}]
```