Extra Practice 8

1. make a list of all of the files in the current directory with a .jpg (case insensitive) or a .jpeg extension
2. Create a 512x512 image representing sin(hypot(x-256,y-256)/10)/(hypot(x-256,y-256)/30+.001) and save it to a png file.

Practice Solutions 8

1.

```
import os
files=[i for i in os.listdir(".") if i.split(".")[-1].lower() in ("jpeg","jpg")]
```

2.

```
# Note that we need *32+127 to scale the values to 0-255 range
# but there is still a bit of overflow near the origin
a=fromfunction(lambda x,y:(sin(hypot(x-256,y-256)/10)*32+127)/
(hypot(x-256,y-256)/30+.001),(512,512))
a=a.astype(uint8)
im=Image.fromarray(a)
im.save("x.png")
```