```
 1 C:\Users\japoe\PycharmProjects\pythonProject\venv\Scripts\python.
   exe "C:\Program Files\JetBrains\PyCharm Community Edition 2021.3\
   plugins\python-ce\helpers\pydev\pydevconsole.py" --mode=client --
   port=52355
 2
 3 import sys; print('Python %s on %s' % (sys.version, sys.platform))
 4 sys.path.extend(['C:\\Users\\japoe\\PycharmProjects', 'C:\\Users\\
   japoe\\Dropbox\\Documents\\School - Graduate\\JHU', 'C:/Users/
   japoe/PycharmProjects'])
 5
 6 Python 3.9.7 (tags/v3.9.7:1016ef3, Aug 30 2021, 20:19:38) [MSC v.
   1929 64 bit (AMD64)]
 7 Type 'copyright', 'credits' or 'license' for more information
 8 IPython 7.30.0 -- An enhanced Interactive Python. Type '?' for
   help.
 9 PyDev console: using IPython 7.30.0
10
11 Python 3.9.7 (tags/v3.9.7:1016ef3, Aug 30 2021, 20:19:38) [MSC v.
   1929 64 bit (AMD64)] on win32
12 In [2]: runfile('C:/Users/japoe/Dropbox/Documents/School -
   Graduate/JHU/Intro to Python Prog. (605.206)/Week14/assignment/
   main.py', wdir='C:/Users/japoe/Dropbox/Documents/School - Graduate
   /JHU/Intro to Python Prog. (605.206)/Week14/assignment')
13 Initial state: 1.0|0> + 0.0|1>
14 Final state: 1.0|0> + 0.0|1>
15 Percentage of 0's measured: 100.0
16 Percentage of 1's measured: 0.0
17
18 Initial state: 0.0|0> + 1.0|1>
19 Invalid operator.
20
21 Initial state: 1.0|0> + 0.0|1>
22 Final state: 0.7071067811865475|0> + 0.7071067811865475|1>
23 Percentage of 0's measured: 50.3
24 Percentage of 1's measured: 49.7
25
26 Initial state: 0.0|0> + 1.0|1>
27 Final state: 0.0|0> + -0.9999999999999998|1>
28 Percentage of 0's measured: 0.0
29 Percentage of 1's measured: 100.0
30
31 Initial state: 0.6|0> + 0.8|1>
32 Final state: 0.7999999999999999|0> + 0.5999999999999999|1>
33 Percentage of 0's measured: 65.3
34 Percentage of 1's measured: 34.7
```

```
35
36 Initial state: 0.7071067811865475|0> + 0.7071067811865475|1>
37 Final state: 0.0|0> + 0.9999999999999998|1>
38 Percentage of 0's measured: 0.0
39 Percentage of 1's measured: 100.0
40
41 Invalid probability amplitude(s).
42
43
```