

```
1 import logging
2 logging.basicConfig(level=logging.DEBUG, filename='sqrt.log') # DEBUG, INFO, WARN,
3
4
5 # add: filename='sqrt.log'
6
7 def sqrt(x, guess = 1.0):
8     if x < 0:
9         logging.error("Got a request for square root of negative number.")
10        raise ValueError
11
12    logging.info("Find sqrt of {} starting with guess {}".format(x, guess))
13    if good_enough(guess, x):
14        return guess
15    else:
16        logging.debug("Guess isn't good enough. Improve ...")
17        new_guess = improve_guess(guess, x)
18        return sqrt(x, new_guess)
19
20 def good_enough(guess, x):
21    logging.debug("Checking if {} is a good enough guess.".format(guess))
22    if abs(guess * guess - x) < 0.1:
23        return True
24    else:
25        return False
26
```