
```
#!/usr/local/cs/bin/python
```

```
"""
```

```
Output lines selected randomly from a file
```

```
Copyright 2005, 2007 Paul Eggert.
```

```
Copyright 2010 Darrell Benjamin Carbajal.
```

```
This program is free software: you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 3 of the License, or
(at your option) any later version.
```

```
This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.
```

```
Please see <http://www.gnu.org/licenses/> for a copy of the license.
```

```
$Id: randline.py,v 1.4 2010/04/05 20:04:43 eggert Exp $
"""
```

```
import random, sys
from optparse import OptionParser
```

```
class randline:
    def __init__(self, filename, wreplace=0):
        self.wreplace=wreplace
        f = open(filename, 'r')
        self.lines = f.readlines()
        f.close()
        if not self.lines:
            self.empty = True
            self.maxlines=0
        else:
            self.empty = False
            self.maxlines=len(self.lines)
```

```
    def maxlines(self):
        return self.maxlines
```

```
    def chooseline(self):
        # If the file is empty, return an empty string
        if not self.empty:
            returnString = random.choice(self.lines)
            if str(self.wreplace) == "True":
                self.lines.remove(returnString)
            return returnString
        raise Exception
```

```
def main():
    version_msg = "%prog 2.0"
    usage_msg = """%prog [OPTION]... FILE1 FILE2 ...
```

```
Output randomly selected lines from FILE."""
```

```
    parser = OptionParser(version=version_msg,
                           usage=usage_msg)
    parser.add_option("-n", "--numlines",
                      action="store", dest="numlines", default=1,
                      help="output NUMLINES lines (default 1)")
    parser.add_option("-w", "--without-replacement",
                      action="store_true", dest="wreplace", default="False",
                      help="output lines without replacement (default no)")
    (options, args) = parser.parse_args()
```

```
wreplace=options.wreplace
```

```
try:
    numlines = int(options.numlines)
except:
    parser.error("invalid NUMLINES: {0}".
                 format(options.numlines))
if numlines < 0:
    parser.error("negative count: {0}".
                 format(numlines))
if len(args) < 1:
    parser.error("wrong number of operands")
```

```
numFiles = len(args)
```

```
try:
    # Loop through all the input files and create a new object for each
```

```
    for i in range(len(args)):
        input_file = args[i]
        generator = randline(input_file, wreplace)
        if numlines > generator.maxlines and str(wreplace) == "True":
            raise Exception
        for index in range(numlines):
            sys.stdout.write(generator.chooseline())
except IOError as err: # Now works with python2 and python3
    parser.error("I/O error({0}): {1}".
                format(err.errno, err))
except Exception:
    parser.error("file length not long enough to process")

if __name__ == "__main__":
    main()
```