

```
PS C:\Users\Kiran Amuthan> & python "c:/Users/Kiran Amuthan/Downloads/Left/b1.py"
[0.8757050037384033, 0.7589704990386963, 1.313488245010376]
mean = 0.9827212492624918
PS C:\Users\Kiran Amuthan>
```

**BENCHMARK 1,
LEFT**

```
PS C:\Users\Kiran Amuthan> & python "c:/Users/Kiran Amuthan/Downloads/Left/b2.py"
[0.026940584182739258, 0.03191518783569336, 0.029918909072875977]
mean = 0.02959156036376953
PS C:\Users\Kiran Amuthan>
```

B2, LEFT

```
PS C:\Users\Kiran Amuthan> & python "c:/Users/Kiran Amuthan/Downloads/Left/b3.py"
[0.027926921844482422, 0.021956443786621094, 0.03485846519470215]
mean = 0.028247276941935223
PS C:\Users\Kiran Amuthan>
```

B3, LEFT

```
PS C:\Users\Kiran Amuthan> & python "c:/Users/Kiran Amuthan/Downloads/Left/b4.py"
[0.019943952560424805, 0.020993471145629883, 0.02094292640686035]
mean = 0.02062678337097168
PS C:\Users\Kiran Amuthan>
```

B4, LEFT

```
PS C:\Users\Kiran Amuthan> & python "c:/Users/Kiran Amuthan/Downloads/Left/b5.py"
[0.11770105361938477, 0.10573267936706543, 0.10874676704406738]
mean = 0.11072683334350586
PS C:\Users\Kiran Amuthan>
```

B5, LEFT

```
PS C:\Users\Kiran Amuthan> & python "c:/Users/Kiran Amuthan/Downloads/Left/b6.py"
[0.815868616104126, 0.7599184513092041, 0.8975493907928467]
mean = 0.8244454860687256
PS C:\Users\Kiran Amuthan>
```

B6, LEFT

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.018917560577392578, 0.01691746711730957, 0.018949270248413086]
mean = 0.018261432647705078
```

**BENCHMARK 1,
MIDDLE**

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.023936033248901367, 0.01994633674621582, 0.019946575164794922]
mean = 0.021276315053304035
```

B2, MIDDLE

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.029920339584350586, 0.02393817901611328, 0.027936220169067383]
mean = 0.027264912923177082
```

B3, MIDDLE

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.024928808212280273, 0.02290630340576172, 0.021943092346191406]
mean = 0.023259401321411133
```

B4, MIDDLE

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.02396869659423828, 0.023969650268554688, 0.036865234375]
mean = 0.028267860412597656
```

B5, MIDDLE

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.019947052001953125, 0.01994633674621582, 0.018949508666992188]
mean = 0.019614299138387043
```

B6, MIDDLE

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.03391075134277344, 0.03494095802307129, 0.03490471839904785]
mean = 0.03458547592163086
```

BENCHMARK 1, RANDOM

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.03291749954223633, 0.03091740608215332, 0.03092169761657715]
mean = 0.0315855344136556
```

B2, RANDOM

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.03591609001159668, 0.0369114875793457, 0.0359039306640625]
mean = 0.036243836085001625
```

B3, RANDOM

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.036890506744384766, 0.03793048858642578, 0.03693675994873047]
mean = 0.037252585093180336
```

B4, RANDOM

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.03789806365966797, 0.03394269943237305, 0.03292584419250488]
mean = 0.03492220242818197
```

B5, RANDOM

```
PS D:\Documents_D\CS240\CS-240> & "C:/Users/Kiran Amuthan/AppData/Local/Python37/python.exe" "d:/Documents_D/CS240/CS-240/Final Exam/QuickSort.py"
[0.028925180435180664, 0.029921531677246094, 0.030885696411132812]
mean = 0.029910802841186523
```

B6, RANDOM