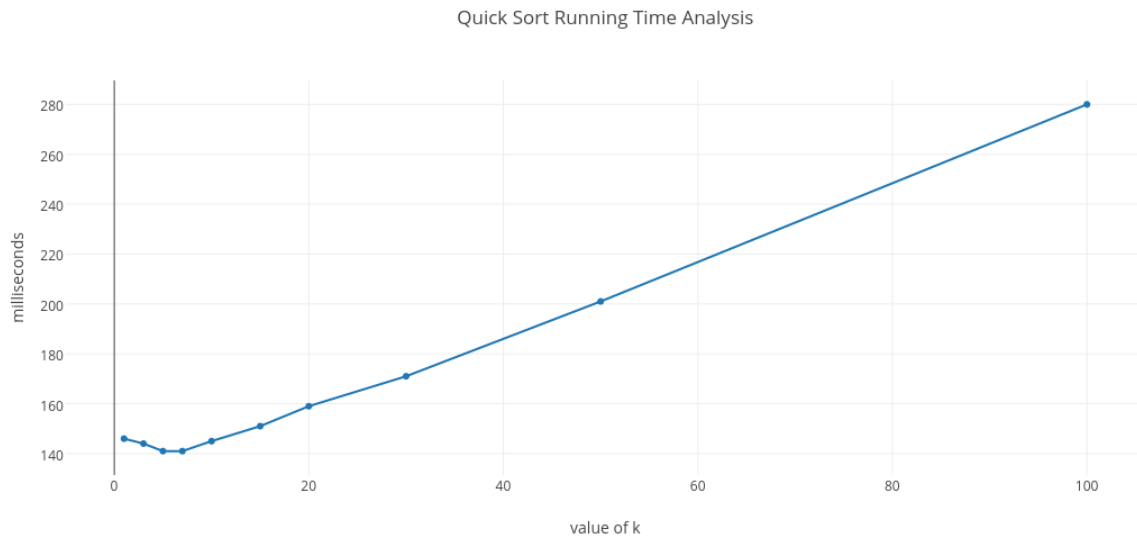


5. Quicksort Performance Evaluation



The runtime is calculated by running the following python script:

```
import os,sys
k_val = [1,3,10,30,100]
for i in range(0,len(k_val)):
    print("For k = "+str(k_val[i])+":")
    for j in range(0,5):
        os.system("./qsort "+str(k_val[i])+ " < input_s1000000.txt > /dev/null")
    print("\n")
```

After executing the python script, the result looks like this:

```
eos$ python runtime.py
For k = 1:
Time:146      Time:145      Time:146      Time:147      Time:149
For k = 3:
Time:142      Time:144      Time:143      Time:144      Time:145
For k = 5:
Time:145      Time:145      Time:140      Time:141      Time:139
For k = 7:
Time:141      Time:144      Time:139      Time:139      Time:143
For k = 10:
Time:142      Time:141      Time:147      Time:145      Time:146
For k = 15:
Time:152      Time:151      Time:151      Time:152      Time:151
For k = 20:
Time:158      Time:160      Time:159      Time:162      Time:157
For k = 30:
Time:171      Time:171      Time:172      Time:171      Time:231
For k = 50:
Time:199      Time:204      Time:196      Time:201      Time:201
For k = 100:
Time:279      Time:280      Time:280      Time:277      Time:285
eos$ █
```