

```
In [ ]: #Program 1: Create 500 texts files in a directory. Every file contains 20,000  
#contains a random string of length 20 characters.  
import random  
import string  
import time  
start_time = time.time()  
for i in range(500):  
    f = open("files/file"+str(i+1)+".txt", "w")  
    for j in range(20000):  
        f.write(''.join(random.choices(string.ascii_letters, k = 20))+"\n")  
    f.close()  
end_time=time.time()  
print("Time taken to create 500 files:",end_time-start_time)
```

Time taken to create 500 files: 53.01231861114502

```
In [ ]: #print a file upto 1000 characters  
f = open("files/file1.txt", "r")  
print(f.read(1000))
```

dnxUwViERhKoMBymDIJG
yczLgtKffQArwywTNnFq
TuKpzyNWamdKaykVROtU
eGqGYOlGpcBGMkjJXcPl
ASdInPvolwUKXrDARNvu
ADCfBrCuXvEDbsZvtTUz
FKSlrQePZBXWbNmhBRbH
BFyzyRttQaSfDbNbYEtI
rJVtuGAyAXswaqXYEPsh
pLKQKhdkWkzTEVDkDEVyK
zMTLUOeVeicYcWjXXWzO
XbxtxpxvxfkjFdUoOiOM
MBcZMNjXYULBLmtPercW
dQOmHlHwMbDJZHEFjORz
DjrABxRGimnmXKpVmuzr
XpsEaugjAYrjDCUPoYOT
BMQuySHBYcEaNHOGUtCM
mNJrpWLCwagLBiCNeGTe
DodCFPbJeUAmeiTSSpBK
CFCFuboJSzdjhlGRMSNH
fMFNMPIfaJIzKOHhtUzB
KtMClZcdwQRtjWbvbOML
oHFOWXrPSQuyHprKParW
NdyLlJHaWIRCJOYYzkXJ
QvYJpwfRjNjmsZOweipR
iAZCLHwnGuLaXUrqNAoa
mFWiQvCawgIpUWNjLbPi
ngivCMmRNztBjvEVNYsC
MMChvMApXrtTikQrDoiJ
GaAdDREuUIHSGEzPWOOF
lessYgCdugGMzotlGHqL
ADqsXQOCNlpKQAMcoodl
qGRkSTAsNTtrLWYqSvNb
iGVGAPjYNLiLjkRGweUM
VpcMNWtQzYxXKFxqJVXI
mgeILJWjhtgaXEJTPWiZ
WrioMLbHuWbBnMYCyvUn
qtdirKdSnHCKCtQgOipE
zGEEKgrMktzdByYptGaX
aNDJNowUSYkTKNpPkqYL
KXYDIqwjxkKIbLNnTons
MrmcjNxNyvDSLEwYczR
oRJgRdSKULScIScTxkHX
rrZazGknLWIONSbywGZC
BsrsYBgWyMYVgoFpVBE
PxosObnKUihpHXizugQT
QzsVQnjHsFotqKxqfKDo
MNPRqHxcBGTKr

```
In [ ]: # Calculate the time taken to convert all the files to upper case.
import csv
data=[]
start_time = time.time()
for i in range(1,501):
    f = open("files/file"+str(i)+".txt", "r")
    lines = f.readlines()
    f.close()
    fl = open("files/file"+str(i)+".txt", "w")
    for line in lines:
        fl.write(line.upper())
    fl.close()
    if(i%100==0):
        ex_time=time.time()-start_time
        data.append([i,ex_time])
        print("Time taken to convert {} to upper case: {}".format(i,ex_time))

c = open('data.csv', 'w')
writer = csv.writer(c)
header=["No.of Files","Time Taken(sec)"]
writer.writerow(header)
writer.writerows(data)
c.close()
```

```
Time taken to convert 100 to upper case: 10.067553043365479
Time taken to convert 200 to upper case: 21.463669776916504
Time taken to convert 300 to upper case: 31.117183685302734
Time taken to convert 400 to upper case: 40.91912484169006
Time taken to convert 500 to upper case: 52.60735058784485
```

```
In [ ]: #print a file upto 1000 characters after upper case conversion
f = open("files/file1.txt", "r")
print(f.read(1000))
```

DNXUWVIERHKOMBYMDIJG
YCZLGTKFFQARWYWTNNFQ
TUKPZYNWAMDKAYKVROTU
EGQGYOLGPCBGMKJJXCPL
ASDINPVOLWUKXRDARNVU
ADCFBRCUXVEDBSZVTU
FKSLRQEPZBXWBNMHRBH
BFYZYRTTQASFDBNBYETI
RJVTUGAYAXSWAQXYEPSH
PLKQKHDWKZTEVDKDEVYK
ZMTLUOEVEICYCWJXXWZO
XBXTXPXVXFKJFDUOOIOM
MBCZMNJXYULBLMTPERCW
DQOMHLHWMBDJZHEFJORZ
DJRABXRGIMNMXKPMUZR
XPSEAUGJAYRJDCUPOYOT
BMQUYSHBYCEANHOGUTCM
MNJRPWLCWAGLBICNEGTE
DODCFPBJEUAMEITSSPBK
CFCFUBOJSZDJHLGRMSNH
FMFNMPIFAJIZKOHHTU
KTMCLZCDWQRTJWBVBOML
OHFOWXRPSQUYHPRKPARW
NDYLLJHAWIRCJOYYZKXJ
QVYJPWFRJNJMSZOWEIPR
IAZCLHWNGULAXURQNAOA
MFWIQVCAWGIPUWNJLBFI
NGIVCMRNZTBJVEVNYSC
MMCHVMAPXRRTIKQRDOIJ
GAADDREUUIHSGEZPWOOF
LESSYGCDUGGMZOTLGHQL
ADQXSXQOCNLPKQAMCOODL
QGRKSTASNTTRLWYQSVNB
IGVGAPJYNLILJKRGWEUM
VPCMNWTQZYXXKFXQJVXI
MGEILJWJHTGAXEJTPWIZ
WRIOMLBHUWBBNMYCYVUN
QTDIRKDSNHCKCTQGOIPE
ZGEEKGRMKTZDBYYPTGAX
ANDJNOWUSYKTKNPPKQYL
KXYDIQWJXKKIBLNNTONS
MRMCJNXNYVDSLEWYCZZR
ORJGRDSKULSCISCTXKHX
RRZAZGKNLWIONSBYWGZC
BSRSYBGWYYMYVGOFVBE
PXOSOBNKUIHPHXIZUGQT
QZSVQNJHSFOTQKXQFKDO
MNPRQHXCGBGTR

In []:

```
#checking the csv file
import pandas as pd
df = pd.read_csv('data.csv')
print(df)
```

	No.of Files	Time Taken(sec)
0	100	10.067553
1	200	21.463670
2	300	31.117184
3	400	40.919125
4	500	52.607351

In []: