

Assignment 1 HPC

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Problem 1:

```
Decrypted String: Lbt Lbtll, Flotd: 1
menna@menna-VirtualBox:~/Assignment1$ mpicc p1.c -o hostfile
menna@menna-VirtualBox:~/Assignment1$ mpirun -np 6 ./hostfile
Hello from master process.
Number of slave processes is 5
Please enter size of array...
10
Please enter array elements ...
1 2 4 8 555 9 3 6 110
5
Hello from slave# 1 Max number in my partition is 2 and index is 1.
Hello from slave# 2 Max number in my partition is 8 and index is 1.
Hello from slave# 3 Max number in my partition is 555 and index is 0.
Hello from slave# 4 Max number in my partition is 6 and index is 1.
Hello from slave# 5 Max number in my partition is 110 and index is 0.
Master process announce the final max which is 555 and its index is 4.
```

Problem 2:

1) Encoded from file

```
menna@menna-VirtualBox:~/Assignment1$ mpicc p2.c -o hostfile
menna@menna-VirtualBox:~/Assignment1$ mpirun -np 2 ./hostfile
Choose input mode:
1. Console input
2. File input
2
1. Enter 1 for Encryption
2. Enter 2 for Decryption
1
Encrypted String: "Khoor, Zr"Khoor, Zr
menna@menna-VirtualBox:~/Assignment1$
```

2) Decoded from file:

```
menna@menna-VirtualBox:~/Assignment1$ mpirun -np 6 ./hostfile
Decrypted String: "Ebi"Ebiil, Tloia! 1
Choose input mode:
1. Console input
2. File input
2
1. Enter 1 for Encryption
2. Enter 2 for Decryption
2
Decrypted String: "Ebi"Ebiil, Tloia! 1
menna@menna-VirtualBox:~/Assignment1$
```

3) Encoded from console

```
menna@menna-VirtualBox:~/Assignment1$ mpirun -np 6 ./hostfile
Choose input mode:
1. Console input
2. File input
1
Enter the string:
aaabcc
1. Enter 1 for Encryption
2. Enter 2 for Decryption
1
Encrypted String: ddddef
```

4) Decoded from console

```
e all help / error messages
menna@menna-VirtualBox:~/Assignment1$ mpicc p2.c -o hostfile
menna@menna-VirtualBox:~/Assignment1$ mpirun -np 6 ./hostfile
Choose input mode:
1. Console input
2. File input
1
1. Enter 1 for Encryption
2. Enter 2 for Decryption
2
Enter the string:
aaabc
Decrypted String: xxxxy
menna@menna-VirtualBox:~/Assignment1$
```