

ANKARA UNIVERSITY
COMPUTER ENGINEERING DEPARTMENT
BLM/COM3035
LAB 2

Üç iplik (*thread*) oluşturan bir C programı yazınız. Her bir iplik sırasıyla input1.txt, input2.txt ve input3.txt olarak adlandırılan girdi dosyalarından sadece birindeki sayıların toplamını ekrana yazdıracaktır. Diğer bir deyişle, ilk iplik input1.txt dosyasındaki sayıları, ikinci iplik input2.txt dosyasındaki sayıları, üçüncü iplik de input3.txt dosyasındaki sayıları tek tek okuyup toplamalarını ekrana yazdıracaktır. Bahsedilen girdi dosyaları ekte paylaşılmıştır. İplik okuma sıraları farklı olabilir. Bizim için toplamalar önemli olacaktır. Örnek program çıktısı aşağıdaki gibi olmalıdır.

```
(base) zeynep@mint:~/Desktop/lab3$ ./a.out
Thread2 reads 1. The value is 5.230000. The sum is : 5.230000
Thread1 reads 1. The value is 1.230000. The sum is : 1.230000
Thread2 reads 2. The value is 5.660000. The sum is : 10.890000
Thread1 reads 2. The value is 2.660000. The sum is : 3.890000
Thread2 reads 3. The value is 6.890000. The sum is : 17.780000
Thread1 reads 3. The value is 3.780000. The sum is : 7.670000
Thread3 reads 1. The value is 5.230000. The sum is : 5.230000
Thread1 reads 4. The value is 8.560000. The sum is : 16.230000
Thread3 reads 2. The value is 5.660000. The sum is : 10.890000
Thread1 reads 5. The value is 9.820000. The sum is : 26.050000
Thread1 Sum is : 26.050000
Thread2 reads 4. The value is 6.740000. The sum is : 24.520000
Thread3 reads 3. The value is 8.890000. The sum is : 19.780000
Thread3 reads 4. The value is 9.740000. The sum is : 29.520000
Thread2 reads 5. The value is 5.230000. The sum is : 29.750000
Thread2 Sum is : 29.750000
Thread3 reads 5. The value is 7.960000. The sum is : 37.480000
Thread3 Sum is : 37.480000
(base) zeynep@mint:~/Desktop/lab3$
```

Not: C dosyanızı öğrenci numaranız olarak adlandırmanız gerekmektedir. Örnek: 18822611.c gibi. Kopya kontrolü yapılacaktır. Kopya olduğu tespit edilen ödevlere sıfır verilecektir.

In English:

Write a C program that creates three threads. Each thread will print the sum of the numbers in only one of the input files, named input1.txt, input2.txt, and input3.txt, respectively. In other words, the first thread will read the numbers in the input1.txt file, the second thread will read the numbers in the input2.txt file, and the third thread will read the numbers in the input3.txt file one by one and

print their total to the screen. The mentioned input files are shared in attachment. Thread reading order may be different. Sums will be important to us. The sample program output should be as follows.

```
(base) zeynep@mint:~/Desktop/lab3$ ./a.out
Thread2 reads 1. The value is 5.230000. The sum is : 5.230000
Thread1 reads 1. The value is 1.230000. The sum is : 1.230000
Thread2 reads 2. The value is 5.660000. The sum is : 10.890000
Thread1 reads 2. The value is 2.660000. The sum is : 3.890000
Thread2 reads 3. The value is 6.890000. The sum is : 17.780000
Thread1 reads 3. The value is 3.780000. The sum is : 7.670000
Thread3 reads 1. The value is 5.230000. The sum is : 5.230000
Thread1 reads 4. The value is 8.560000. The sum is : 16.230000
Thread3 reads 2. The value is 5.660000. The sum is : 10.890000
Thread1 reads 5. The value is 9.820000. The sum is : 26.050000
Thread1 Sum is : 26.050000
Thread2 reads 4. The value is 6.740000. The sum is : 24.520000
Thread3 reads 3. The value is 8.890000. The sum is : 19.780000
Thread3 reads 4. The value is 9.740000. The sum is : 29.520000
Thread2 reads 5. The value is 5.230000. The sum is : 29.750000
Thread2 Sum is : 29.750000
Thread3 reads 5. The value is 7.960000. The sum is : 37.480000
Thread3 Sum is : 37.480000
(base) zeynep@mint:~/Desktop/lab3$
```

Note: You have to name your C file as your student number, like 18822611.c. Software similarity control will be done. Assignments with similarity will be given zero.