PDC Lab 1

Advait Deochakke

20BCE1143 - 27 July '22

Question 1: Print your name two times using OpenMP

```
Desktop / Pdc / lab1
                                                                           advait@advait: ~/Desktop/Pdc/lab1
                       C
                                      advait@advait:~/Desktop/Pdc/lab1$ export OMP_NUM_THREADS=2
                                      advait@advait:~/Desktop/Pdc/lab1$ gcc -o l11 -fopenmp LAB1_1.c advait@advait:~/Desktop/Pdc/lab1$ ./l11 Advait DeochakkeAdvait Deochakkeadvait@advait:~/Desktop/Pdc/lab1$ []
                                                          LAB1_1.c - Pdc - Visual Studio Code
File Edit Selection View Go Run Terminal Help
       EXPLORER ... C LAB1_1.c × C LAB1_omp.c
             ほほひ lab1 > C LAB1_1.c
                               1 #include <stdio.h>
2 #include<omp.h>
       C LAB1_1.c
                                    int main(int argc, char **argv)
       C LAB1_addParallel.c
       C LAB1_omp.c
                                         #pragma omp parallel
       > lab2
```

Question 2: Print your name four times using OpenMP

```
advait@advait:-/Desktop/Pdc/lab1$ export OMP_NUM_THREADS=2 advait@advait:-/Desktop/Pdc/lab1$ gcc -o l11 -fopenmp LAB1_1.c advait@advait:-/Desktop/Pdc/lab1$ gcc -o l11 -fopenmp LAB1_1.c advait@advait:-/Desktop/Pdc/lab1$ -/111 Advait Deochakkeadvait@advait:-/Desktop/Pdc/lab1$ advait@advait:-/Desktop/Pdc/lab1$ sxport OMP_NUM_THREADS=4 advait@advait:-/Desktop/Pdc/lab1$ ./111 Advait Deochakkeadvait Deochakkeadvait Deochakkeadvait Deochakkeadvait Deochakkeadvait@advait:-/Desktop/Pdc/lab1$ ./111 Advait Deochakkeadvait Deochakkeadvait Deochakkeadvait@advait:-/Desktop/Pdc/lab1$ ./111 Advait Deochakkeadvait Deochakkeadvait Deochakkeadvait@advait:-/Desktop/Pdc/lab1$ ./111 Advait Deochakkeadvait Deochakkeadvait Deochakkeadvait Deochakkeadvait.-/Desktop/Pdc/lab1$ ./111 Advait Deochakkeadvait Deochakkeadvait Deochakkeadvait.-/Desktop/Pdc/lab1$ ./111 Advait Deochakkeadvait Deochakkeadvait Deochakkeadvait.-/Desktop/Pdc/lab1$ ./111 Advait Deochakkeadvait Deochakkeadvait Deochakkeadvait Deochakkeadvait Deochakkeadvait Deochakkeadvait Deochakkeadvait.-/Desktop/Pdc/lab1$ ./111 Advait Deochakkeadvait Deoch
```

```
#include <stdio.h>
#include<omp.h>

int main(int argc, char **argv)
{
    #pragma omp parallel
    printf("Advait Deochakke");
    return 0;
}
```

Question 3: Perform array addition using parallel construct and print the results

```
advait@advait: ~/Desktop/Pdc/lab1
                                                                                                                                                 Q ≡
Ö
                                   C
                                                                 advait@advait:-/Desktop/Pdc/labi$ export OMP_NUM_THREADS=4
advait@advait:-/Desktop/Pdc/labi$ gcc -o l12 -fopenmp LAB1_addParallel.c
advait@advait:-/Desktop/Pdc/labi$ ./l12
    LAB1_addParallel.c - Pdc - Visual Studio Code
                C LAB1_addParallel.c X
   #include<omp.h>
     int main(int argc, char **argv)
           int a[8]={1, 2, 3, 4, 5, 6, 7, 8};
int b[8]={8, 7, 6, 5, 4, 3, 2, 1};
           #pragma omp parallel
                 for(int i=0; i<8; i++)
                       c[i]=a[i]+b[i];
                       printf("%d\n", c[i]);
                                                                 advait@advait:~/Desktop/Pdc/lab1$ ^C
advait@advait:~/Desktop/Pdc/lab1$
           printf("test");
           return 0;
```

Output: Printed 9 times for each iteration on each CPU core, total 36 times addition is done and result of the addition is printed.

```
#include<omp.h>
#include <stdio.h>

int main(int argc, char **argv)
{
    int a[8]={1, 2, 3, 4, 5, 6, 7, 8};
    int b[8]={8, 7, 6, 5, 4, 3, 2, 1};
    int c[8];

    #pragma omp parallel
    {
        for(int i=0; i<8; i++)
        {
            c[i]=a[i]+b[i];
            printf("%d\n", c[i]);
        }

        printf("test");
        return 0;
}</pre>
```