Tugas Pemrograman Parallel

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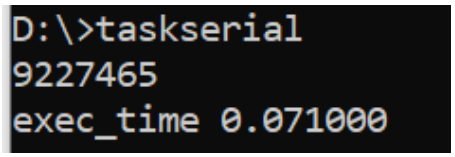
Fibonacci Serial – *Source Code*

```c
#include <stdio.h>
#include <time.h>

int fib(int n){
	int x,y;
	if(n<2) return n;
	else{
		x = fib(n-1);
		y = fib(n-2);
		return x+y;
	}
}

int main(){
	int n = 35;
	int R = 0;
	long start, finish;
	double exec_time;

	start = clock();
	R = fib(n);
	printf("%d\n", R);
	finish = clock();

	exec_time = (double) (finish - start)/CLOCKS_PER_SEC;
	printf("exec_time %1f\n", exec_time);
}
```

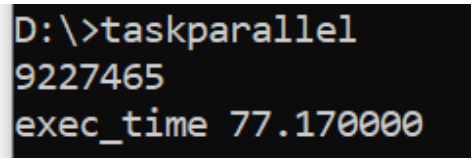
Fibonacci Serial – *Execution Time*



Fibonacci Parallel – *Source Code*

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

int fib(int n){
      int x,y;
      if(n<2) return n;
      else{
            #pragma omp task shared(x) if(n>30)
            x = fib(n-1);

            #pragma omp task shared(y) if(n>30)
            y = fib(n-2);

            #pragma omp taskwait
            return x+y;
      }
}

int main(){
      int n = 35;
      int R = 0;
      long start, finish;
      double exec_time;

      start = clock();
      #pragma omp parallel num_threads(4)
      {
            #pragma omp single
            R = fib(n);
      }
      printf("%d\n", R);
      finish = clock();

      exec_time = (double) (finish - start)/CLOCKS_PER_SEC;
      printf("exec_time %1f\n", exec_time);
}
```

Fibonacci Parallel – *Execution Time*



Program Fibonacci Parallel saya menunjukkan waktu eksekusi yang lebih lama dibandingkan dengan versi Fibonacci Rekursif Serial aslinya.