LAB FAT
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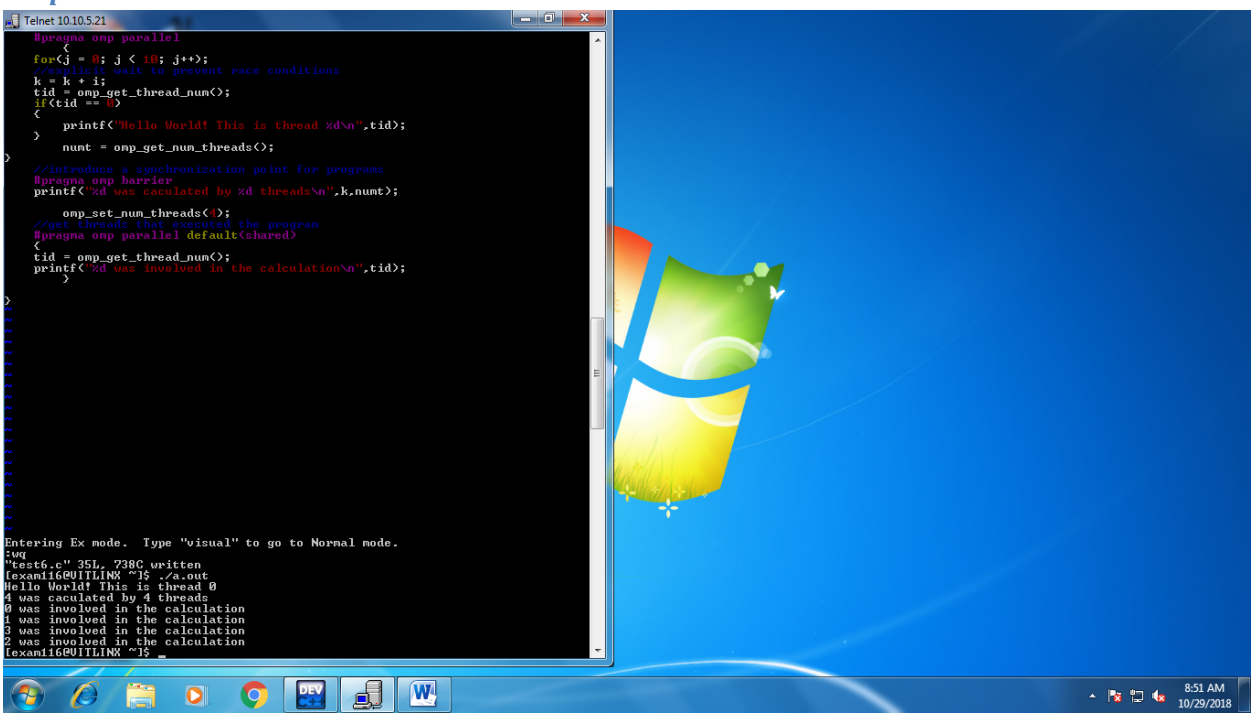
Question 4

Source Code

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

int tid;
int main()
{
   int j, k=0,numt,i=1;

   omp_set_num_threads(4);
   //parallelize
   #pragma omp parallel
   {
            for(j = 0; j < 10; j++);
            //explicit wait to prevent race conditions
            k = k + i;
            tid = omp_get_thread_num();
            if(tid == 0)
            {
               printf("Hello World! This is thread %d\n",tid);
            }
      numt = omp_get_num_threads();
         }

         //introduce a synchronization point for programs
   #pragma omp barrier
   printf("%d was caculated by %d threads\n",k,numt);

   omp_set_num_threads(4);
   //get threads that executed the program
   #pragma omp parallel default(shared)
   {
         tid = omp_get_thread_num();
         printf("%d was involved in the calculation\n",tid);
   }

}
```

Output



[exam116@VITLINX ~]$ ./a.out
Hello World! This is thread 0
4 was caculated by 4 threads
0 was involved in the calculation
1 was involved in the calculation
3 was involved in the calculation
2 was involved in the calculation