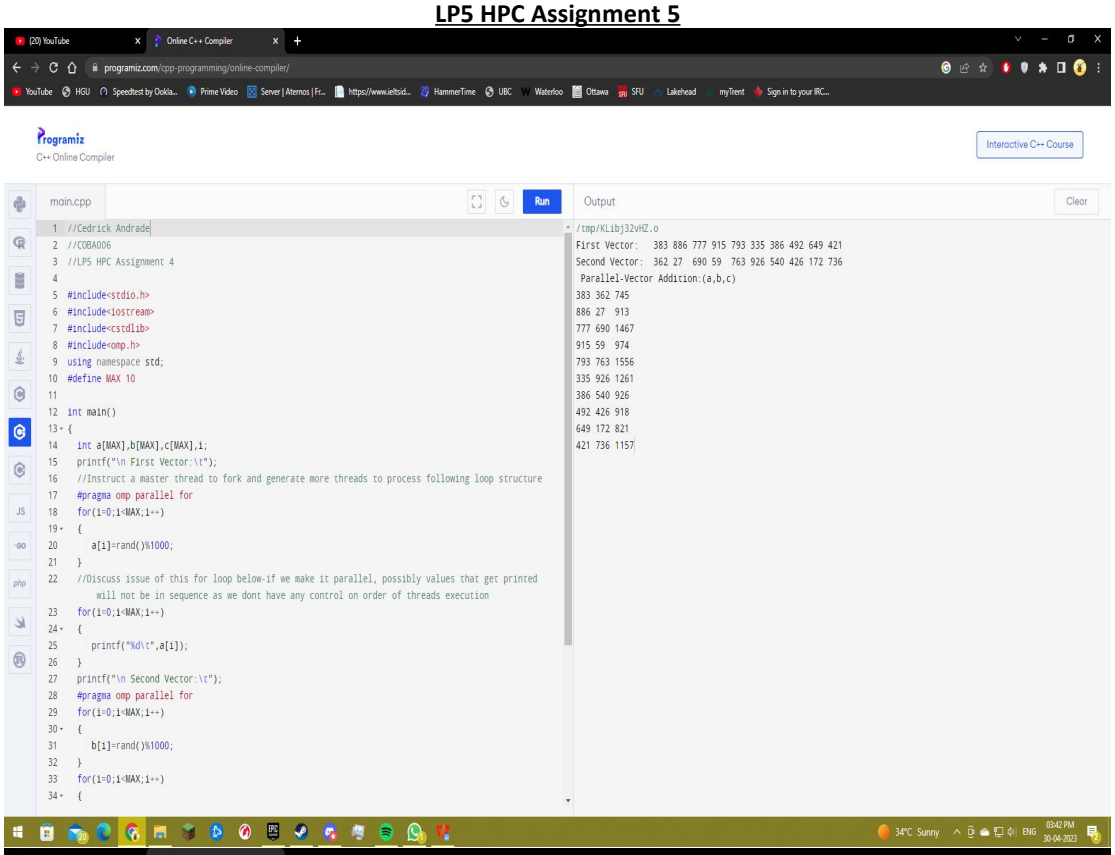
Cedrick Andrade
COBA006

LP5 HPC Assignment 5

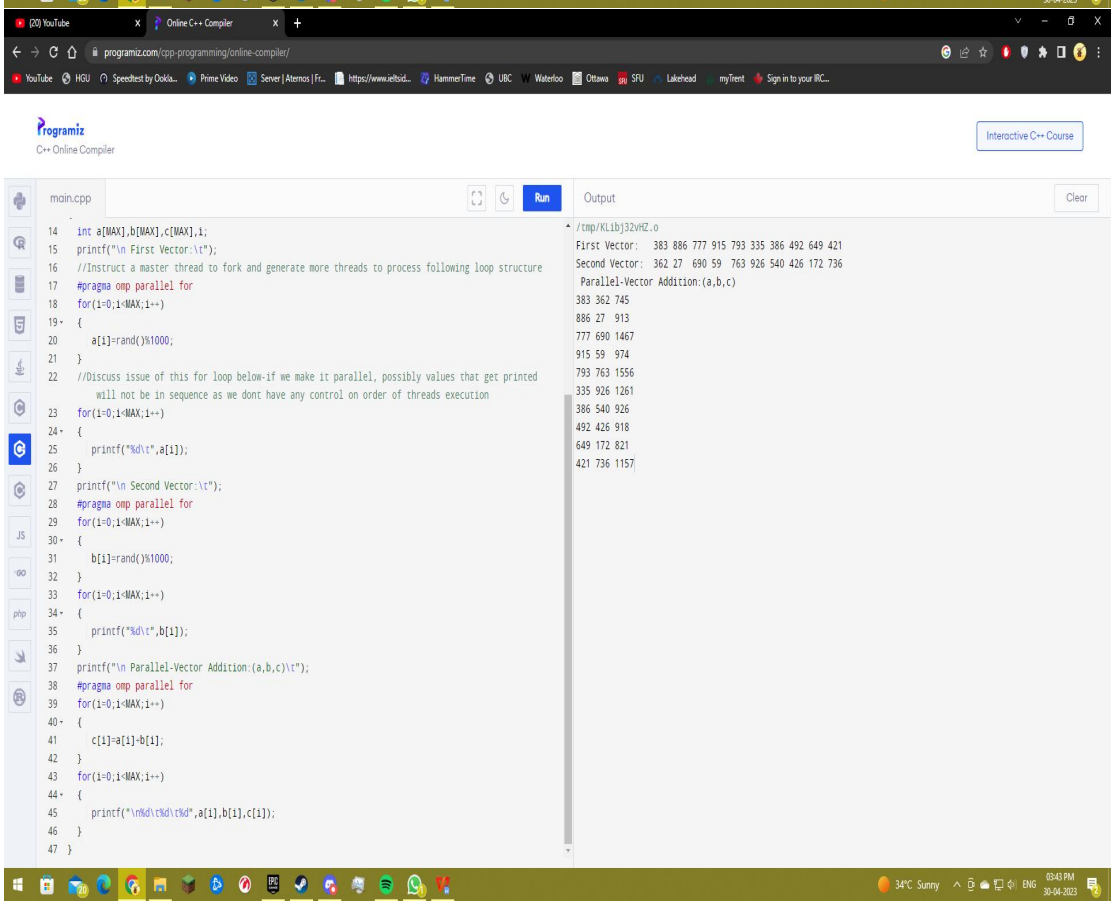


```
//Cedrick Andrade
//COBA006
//LP5 HPC Assignment 4

#include<stdio.h>
#include<iostream>
#include<cstdlib>
#include<omp.h>
using namespace std;
#define MAX 10

int main()
{
  int a[MAX],b[MAX],c[MAX],i;
  printf("\n First Vector:\t");
  //Instruct a master thread to fork and generate more threads to process following loop structure
  #pragma omp parallel for
  for(i=0;i<MAX;i++)
  {
    a[i]=rand()%1000;
  }
  //Discuss issue of this for loop below-if we make it parallel, possibly values that get printed
      will not be in sequence as we dont have any control on order of threads execution
  for(i=0;i<MAX;i++)
  {
    printf("%d\t",a[i]);
  }
  printf("\n Second Vector:\t");
  #pragma omp parallel for
  for(i=0;i<MAX;i++)
  {
    b[i]=rand()%1000;
  }
  for(i=0;i<MAX;i++)
  {
```

```
/tmp/KLibj32vHZ.o
First Vector:   383 886 777 915 793 335 386 492 649 421
Second Vector:  362 27  690 59  763 926 540 426 172 736
 Parallel-Vector Addition:(a,b,c)
383 362 745
886 27  913
777 690 1467
915 59  974
793 763 1556
335 926 1261
386 540 926
492 426 918
649 172 821
421 736 1157
```



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  {
    printf("%d\t",a[i]);
  }
  printf("\n Second Vector:\t");
  #pragma omp parallel for
  for(i=0;i<MAX;i++)
  {
    b[i]=rand()%1000;
  }
  for(i=0;i<MAX;i++)
  {
    printf("%d\t",b[i]);
  }
  printf("\n Parallel-Vector Addition:(a,b,c)\t");
  #pragma omp parallel for
  for(i=0;i<MAX;i++)
  {
    c[i]=a[i]+b[i];
  }
  for(i=0;i<MAX;i++)
  {
    printf("\n%d\t%d\t%d",a[i],b[i],c[i]);
  }
}
```

```
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