SOUTHEAST UNIVERSITY

Meeting the Challenges of Time

Department Of CSE

Cse Assignment

Assignment No:02

Date of submission:

Course name : CSE LAB

Course code : 241

Section : 7

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[lecturer, Department of CSE]

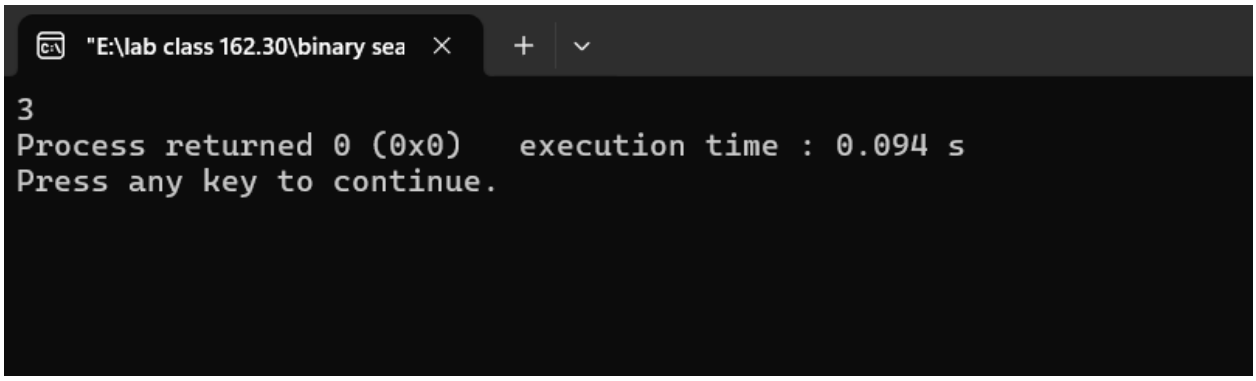
Initial : YMA

Code 1:

```
#include<stdio.h>


int main(){
   int array[] = {2, 4, 7, 9, 13, 15, 15, 21, 23};
   int beg = 0, end = 8, key = 9, mid ;


   while(beg <= end){
      mid = (beg + end) / 2;
      if (array[mid] == key){
         printf("%d", mid);
         break;
      }
       if(array[mid] < key ){
         beg = mid + 1;
       }


       else{
         end = mid -1;
       }
   }
   return 0;
```

}

Terminal:

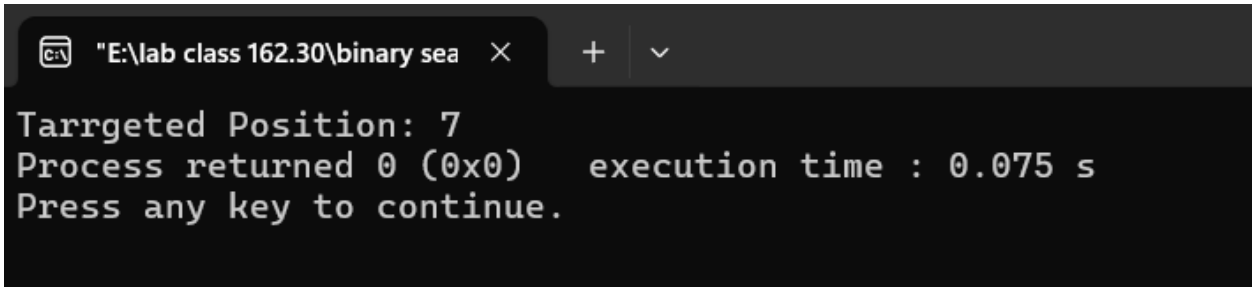


Code 2.1:

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


int main(){
    int array[] = {7, 3, 4, 2, 9, 21, 15, 23};
    int beg = 0, end = 7, key = 23, mid , temp;


    //bubble sort
    for(int i = 0; i < 7; i++){
        for(int j = 0 ; j < 7 -i -1; j++){


            if(array[j] > array[j+1]){
             temp = array[j];
```

```
            array[j] = array[j+1];
            array[j+1] = temp;
          }
        }
    }

    //binary search
    while(beg <= end){
        mid = (beg + end) / 2;
        if (array[mid] == key){
            printf("Targeted Position: %d", mid);
            break;
        }
         if(array[mid] < key ){
            beg = mid + 1;
         }
         else{
            end = mid -1;
         }
    }
    return 0;
}
j] = array[j+1];
            array[j+1] = temp;
          }
        }
    }
```

Terminal:

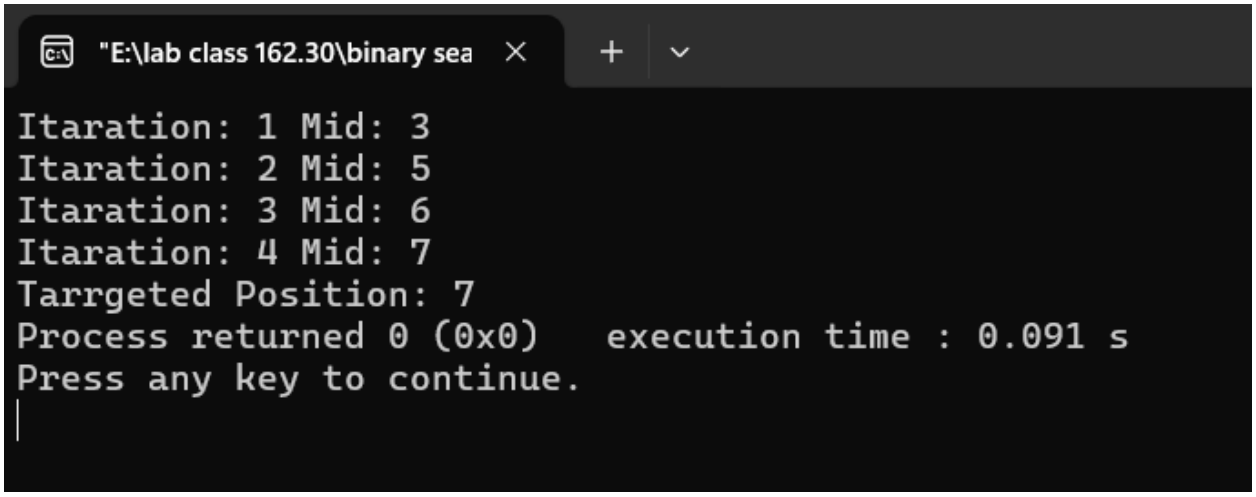


Code 2.2:

```
#include<stdio.h>

#include<stdlib.h>


int main(){

   int array[] = {7, 3, 4, 2, 9, 21, 15, 23};

   int beg = 0, end = 7, key = 23, mid , temp, itar = 0;


   //bubble sort

   for(int i = 0; i < 7; i++){

      for(int j = 0 ; j < 7 -i -1; j++){


         if(array[j] > array[j+1]){

          temp = array[j];

          array[j] = array[j+1];

          array[j+1] = temp;

        }

      }

   }
```

```
    //binary search
    while(beg <= end){
        mid = (beg + end) / 2;
        itar++;
        printf("Iteration: %d ", itar);
        printf("Mid: %d \n", mid);
        if (array[mid] == key){
            printf("Tarrgeted Position: %d", mid);
            break;
        }


         if(array[mid] < key ){
            beg = mid + 1;
         }

         else{
            end = mid -1;
         }
    }
    return 0;
}
```

Terminal:


"E:\lab class 162.30\binary sea
Itaration: 1 Mid: 3
Itaration: 2 Mid: 5
Itaration: 3 Mid: 6
Itaration: 4 Mid: 7
Tarrgeted Position: 7
Process returned 0 (0x0)   execution time : 0.091 s
Press any key to continue.