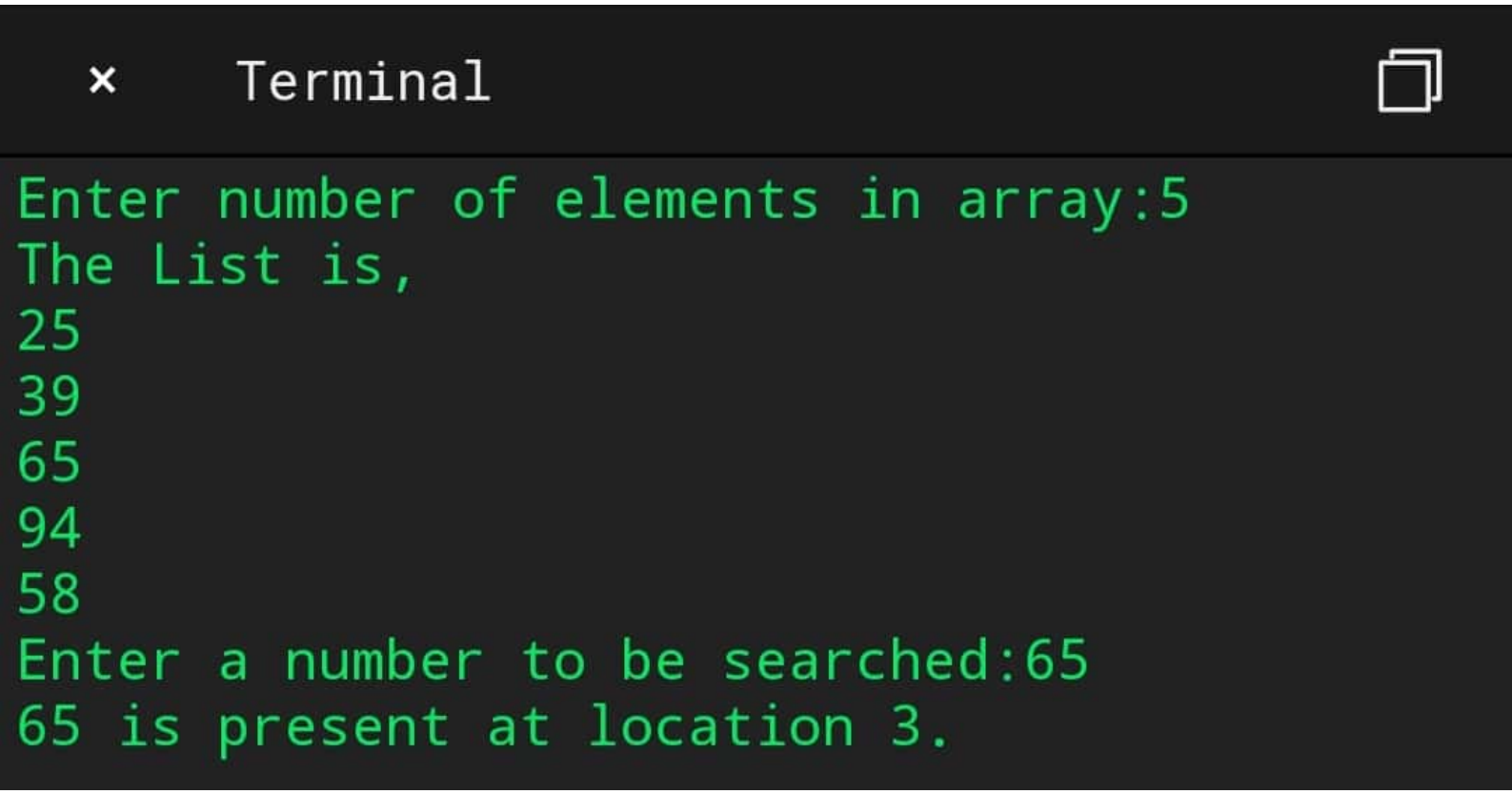
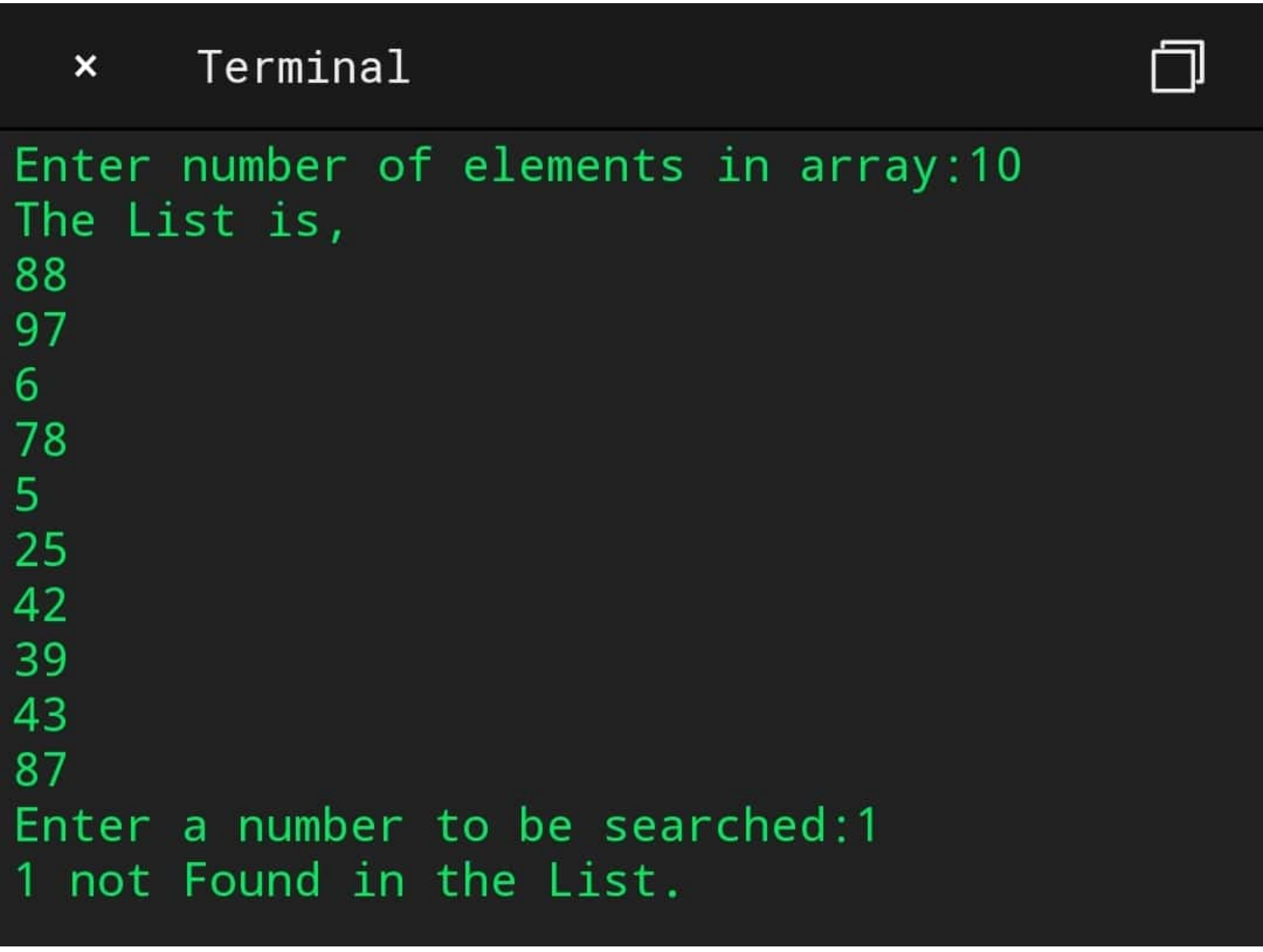
LinearSearch.c

Saved

```c
#include<stdio.h>
void main()
{
  int search,c,n;
  srand(time(0));
  printf("Enter number of elements in array:");
  scanf("%d",&n);
  int array[n];
  for(c=0;c<n;c++)
      array[c]=rand()%100;
  printf("The List is,\n");
  for(c=0;c<n;c++)
      printf("%d\n",array[c]);
  printf("Enter a number to be searched:");
  scanf("%d",&search);
  for(c=0;c<n;c++)
  {
    if (array[c]==search)
    {
      printf("%d is present at location %d.\n", search, c+1);
      break;
    }
  }
    if(c==n){
        printf("%d not Found in the List.\n", search);
  }
}
```





BinarySearch.c

Saved

```c
#include<stdio.h>
void main()
{
  int c, first, last, middle, n, search, a;
  srand(time(0));
  printf("Enter number of elements:");
  scanf("%d", &n);
  int array[n];
 for(c=0;c<n;c++)
     array[c]=rand()%100;
  printf("The List is,\n");
  for(c=0;c<n;c++)
     printf("%d\n",array[c]);
  for (int i = 0; i < n; ++i)
       {
           for (int j = i + 1; j < n; ++j)
           {
               if (array[i] > array[j])
               {
                   a = array[i];
                   array[i] = array[j];
                   array[j] = a;
               }
           }
       }
  printf("The sorted list is,\n");
  for(c=0;c<n;c++)
     printf("%d\n",array[c]);
  printf("\nEnter element to be searched:");
  scanf("%d", &search);
  first = 0;
  last = n-1;
  middle = (first+last)/2;
  while(first<=last){
    if(array[middle]<search)
      first = middle+1;
    else if(array[middle] == search) {
      printf("%d found at location %d.\n", search, middle+1);
      break;
    }
    else
      last = middle-1;
    middle = (first + last)/2;
  }
  if(first>last)
    printf("Not found!\n%d isn't present in the list.\n", search);
}
```