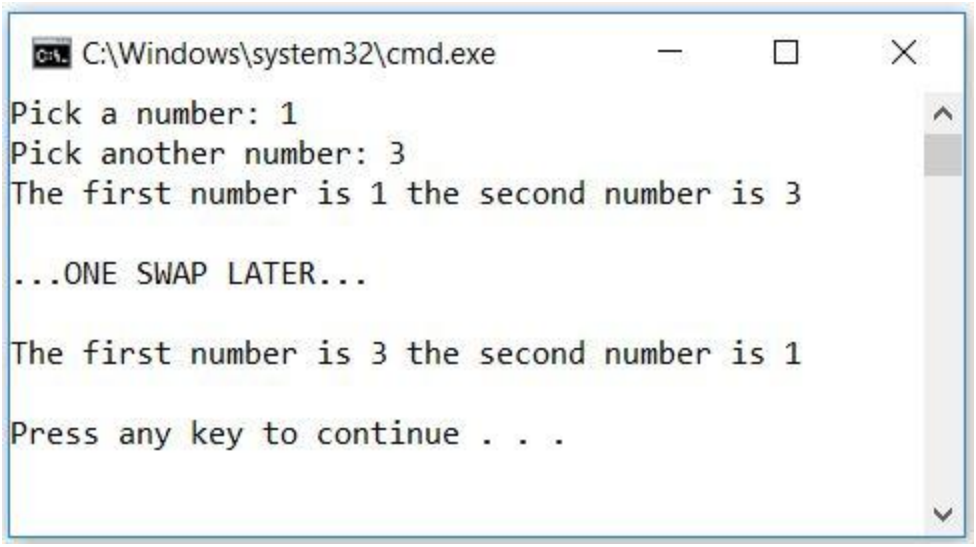
```
//Course:            CS2400-60 Computer Science 2
//Name:              Abdalkarim, Marina
//Assignment:        Programming Assignment #1
//Date Assigned:     9/05/18
//Date due:          9/20/18
//Date handed in:    9/18/18
//Remark:            Should swap the numbers
#include <iostream>
#include <iomanip>
#include <cmath>
using namespace std;
void swap(int &a, int &b);
int main()
{
        int x, y;
        cout << "Pick a number: ";
        cin >> x;
        cout << "Pick another number: ";
        cin >> y;
        cout << "The first number is " << x << " the second number is " << y << endl << endl;
        cout << "...ONE SWAP LATER..." << endl << endl;
        swap(x, y);
        cout << "The first number is " << x << " the second number is " << y << endl << endl;
   return 0;
}
void swap(int &a, int &b)
{
        int temp1, temp2;
        temp1 = a;
        temp2 = b;
        a = temp2;
        b = temp1;
}
```

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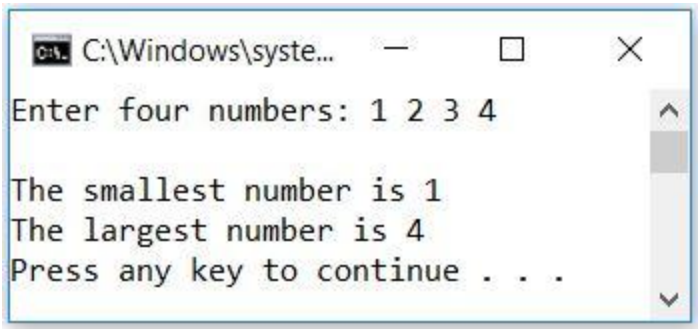
//Name:             Abdalkarim, Marina
//Assignment:       Programming Assignment #1
//Date Assigned:    9/05/18
//Date due:         9/20/18
//Date handed in:   9/18/18
//Remark:           Should list largest to smallest.
#include <iostream>
#include <iomanip>
#include <cmath>
using namespace std;
void largest_and_Smallest(int &a, int &b, int &c, int &d, int &smallest, int &largest);
int main()
{
        int w, x, y, z, small, large;
        cout << "Enter four numbers: ";
        cin >> w >> x >> y >> z;
        cout << endl;
        largest_and_Smallest(w, x, y, z, small, large);
        cout << "The smallest number is " << small << endl;
        cout << "The largest number is " << large << endl;
   return 0;
}
void largest_and_Smallest(int &a, int &b, int &c, int &d, int &smallest, int &largest)
{
        if (a > b)
```

```
                largest = a;
        else
                largest = b;
        if (c > largest)
                largest = c;
        if (d > largest)
                largest = d;
        if (a < b)
                smallest = a;
        else
                smallest = b;
        if (c < smallest)
                smallest = c;
        if (d < smallest)
                smallest = d;
}
```

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//Assignment:       Programming Assignment #1
//Date Assigned:    9/05/18
//Date due:         9/20/18
//Date handed in:   9/18/18
//Remark:           Should keep counting.
#include "stdafx.h"
#include <iostream>
#include <iomanip>
#include <cmath>
using namespace std;
void counting();
int main()
{
```
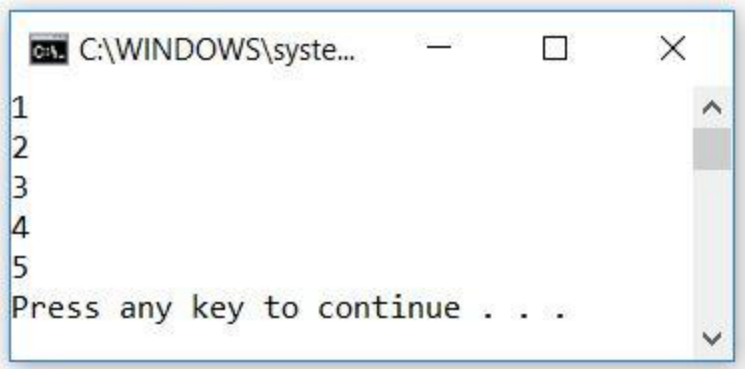

```
	counting();
	counting();
	counting();
	counting();
	counting();
	return 0;
}
void counting()
{
	static unsigned int count = 1;
	cout << count << endl;
	count++;
}
```




```
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//Assignment:	Programming Assignment #1
//Date Assigned:	9/05/18
//Date due:		9/20/18
//Date handed in:	9/18/18
//Remark:		Should list largest to smallest.
#include <iostream>
#include <iomanip>
using namespace std;
void f();
int x = 5;
int main()
{
	cout << "x = " << x << endl;
	int x = 6;
	cout << "x = " << x << endl;
```
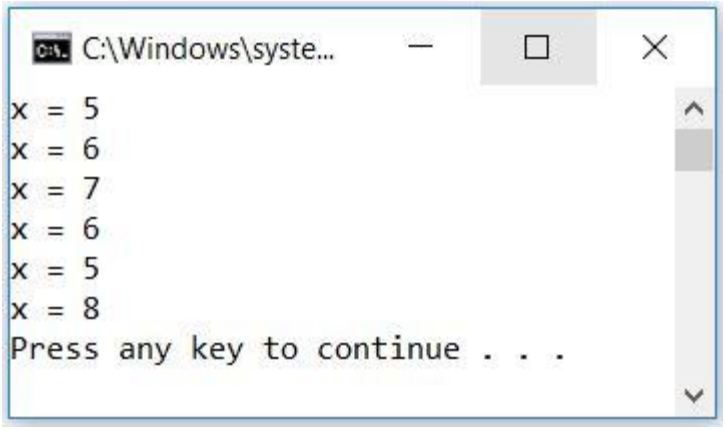

```
	{
		int x = 7;
		cout << "x = " << x << endl;
	}
	cout << "x = " << x << endl;
	f();
	return 0;
}
void f()
{
	cout << "x = " << x << endl;
	int x = 8;
	cout << "x = " << x << endl;
}
```

a.) x = 5
x = 6
x = 7
x = 6
x = 5
x = 8

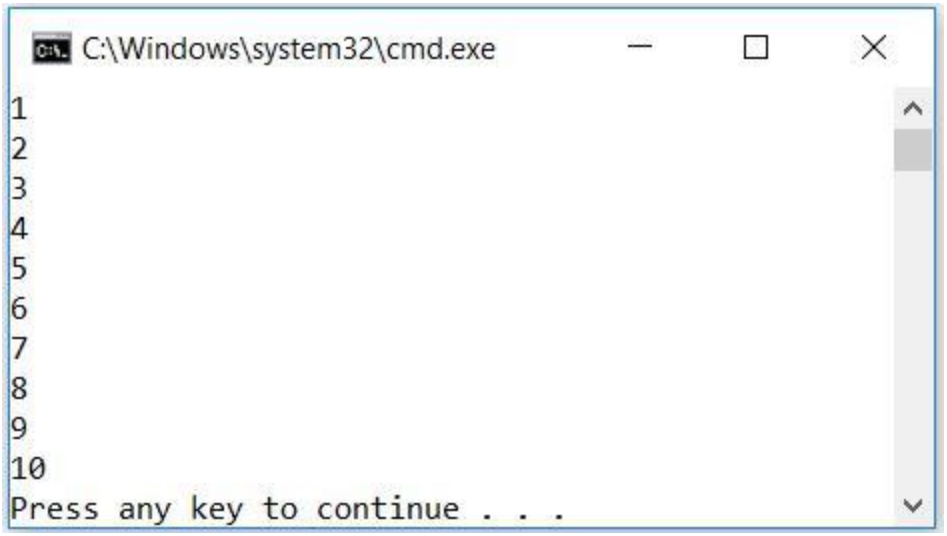
b.)



Yay I'm smart.

```
//Course:		CS2400-60 Computer Science 2
//Name:		Abdalkarim, Marina
//Assignment:	Programming Assignment #1
//Date Assigned:	9/05/18
//Date due:		9/20/18
//Date handed in:	9/18/18
//Remark:		Should fill the array.
#include <iostream>
```

```
#include <iomanip>
#include <cmath>
using namespace std;
void display_array(int x[], int y);
int main()
{
	const int SIZE = 10;
	int a[SIZE] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10};
	display_array(a, SIZE);
	return 0;
}
void display_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cout << x[i] << endl;
}
```




```
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//Name:		Abdalkarim, Marina
//Assignment:	Programming Assignment #1
//Date Assigned:	9/05/18
//Date due:		9/20/18
//Date handed in:	9/18/18
//Remark:		Should fill the array.
#include <iostream>
#include <iomanip>
#include <cmath>
```
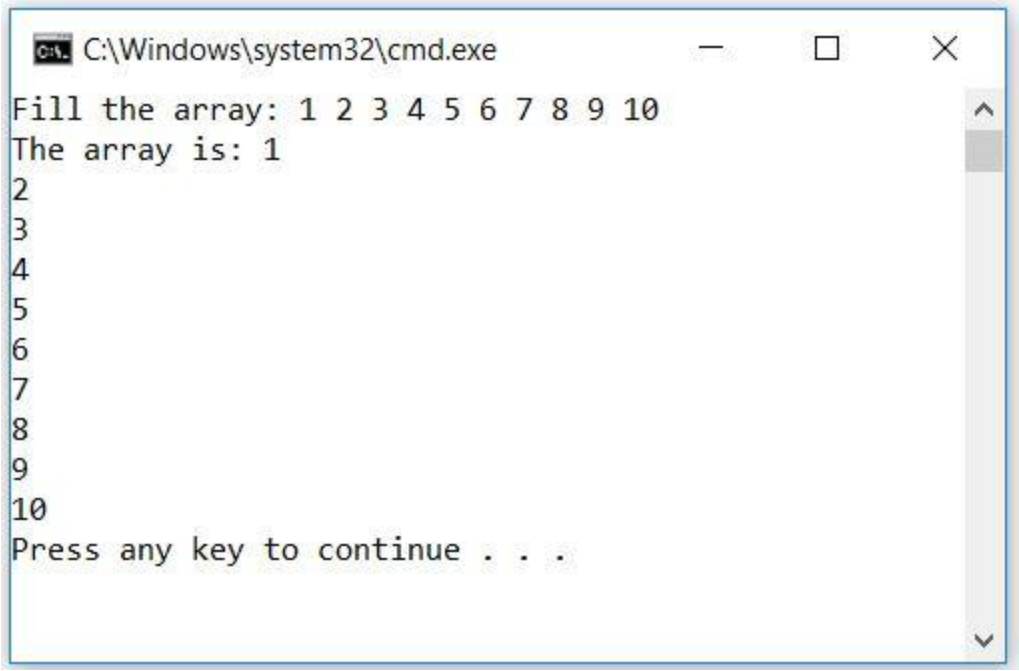
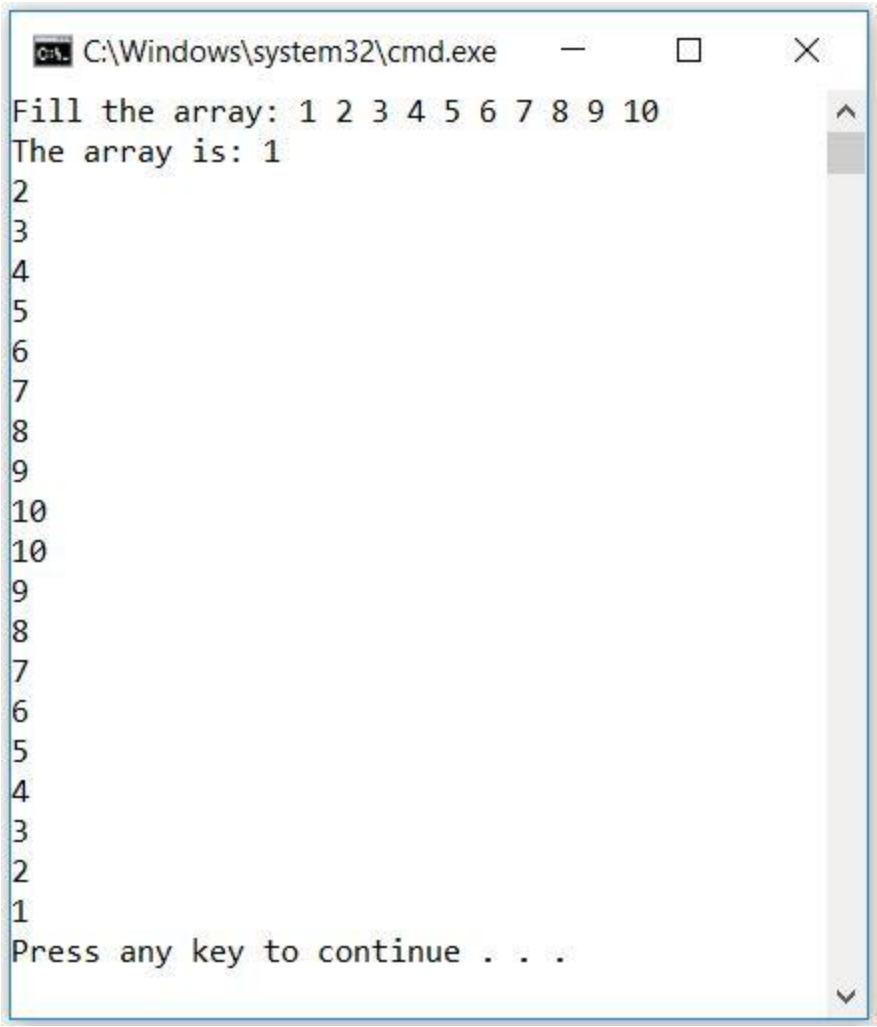

```
using namespace std;
void display_array(int x[], int y);
void fill_array(int x[], int y);
int main()
{
	const int SIZE = 10;
	int a[SIZE];
	cout << "Fill the array: ";
	fill_array(a, SIZE);
	cout << "The array is: ";
	display_array(a, SIZE);
	return 0;
}
void display_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cout << x[i] << endl;
}
void fill_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cin >> x[i];
}
```



```
//Course:             CS2400-60 Computer Science 2
//Name:               Abdalkarim, Marina
//Assignment:         Programming Assignment #1
//Date Assigned:      9/05/18
//Date due:           9/20/18
//Date handed in:     9/18/18
//Remark:             Should fill the array and reverse the array.
#include <iostream>
#include <iomanip>
#include <cmath>
using namespace std;
void display_array(int x[], int y);
void fill_array(int x[], int y);
void reverse(int x[], int y);
int main()
{
	const int SIZE = 10;
	int a[SIZE];
	cout << "Fill the array: ";
	fill_array(a, SIZE);
	cout << "The array is: ";
	display_array(a, SIZE);
	reverse(a, SIZE);
	return 0;
}
void fill_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cin >> x[i];
}
void display_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cout << x[i] << endl;
}
void reverse(int x[], int y)
{
	for (int i = 1; i < y + 1; i++)
		cout << x[y - i] << endl;
```

}




```
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//Name:             Abdalkarim, Marina
//Assignment:       Programming Assignment #1
//Date Assigned:    9/05/18
//Date due:         9/20/18
//Date handed in:   9/18/18
//Remark:           Should search for the value in the array.
#include <iostream>
#include <iomanip>
#include <cmath>
using namespace std;
void display_array(int x[], int y);
void fill_array(int x[], int y);
void linear_search(int x[], int y);
```
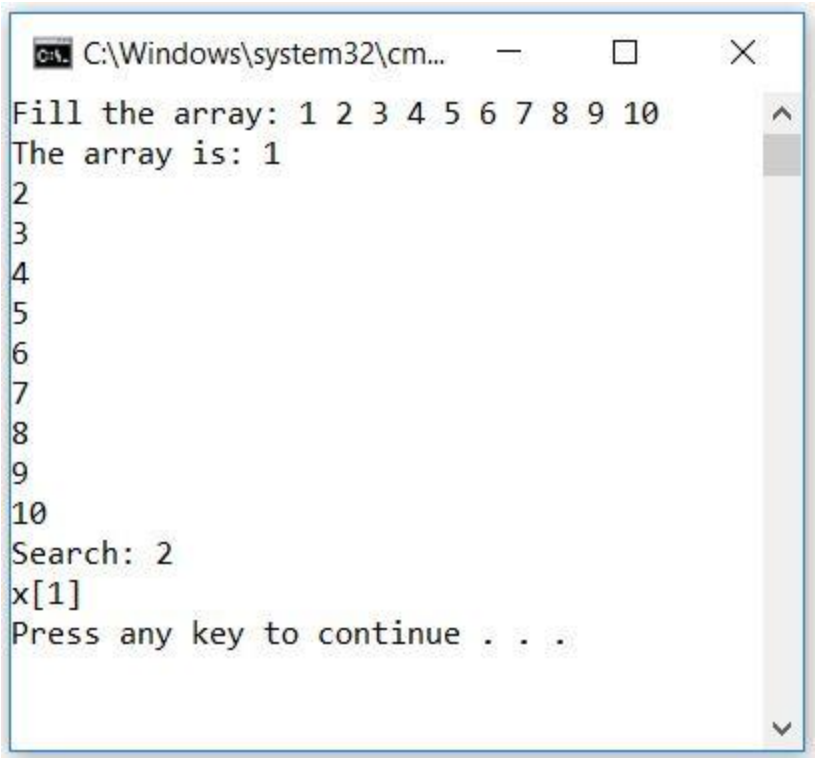
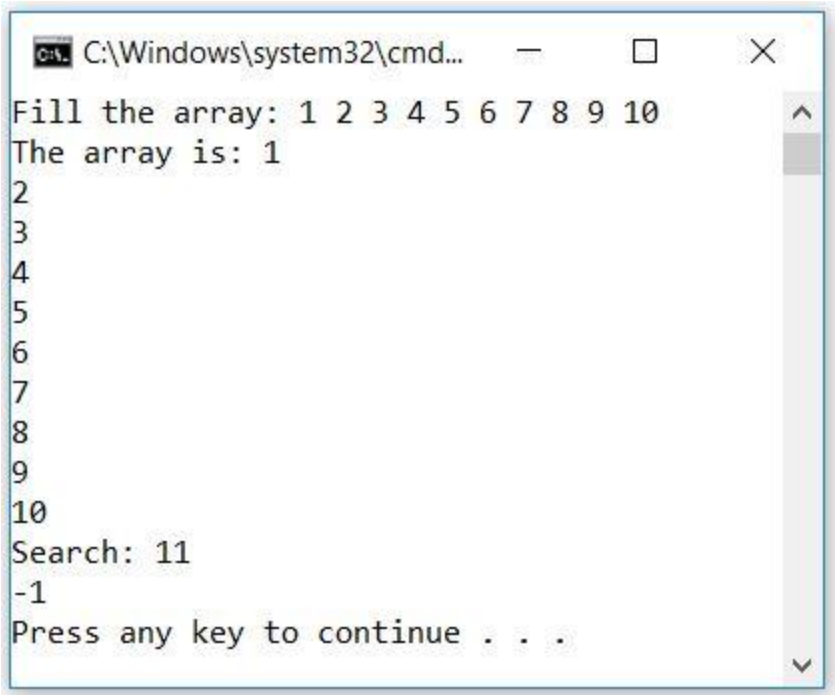

```
int main()
{
	const int SIZE = 10;
	int a[SIZE];
	cout << "Fill the array: ";
	fill_array(a, SIZE);
	cout << "The array is: ";
	display_array(a, SIZE);
	linear_search(a, SIZE);
	return 0;
}
void fill_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cin >> x[i];
}
void display_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cout << x[i] << endl;
}
void linear_search(int x[], int y)
{
	int find;
	bool a;
	cout << "Search: ";
	cin >> find;
	for (int i = 0; i < y; i++)
	{
		if (x[i] == find)
			cout << "x[" << i << "]" << endl;
		if (x[i] != find)
			a = false;
	}
	if (a == false)
		cout << “-1” << endl;
}
```



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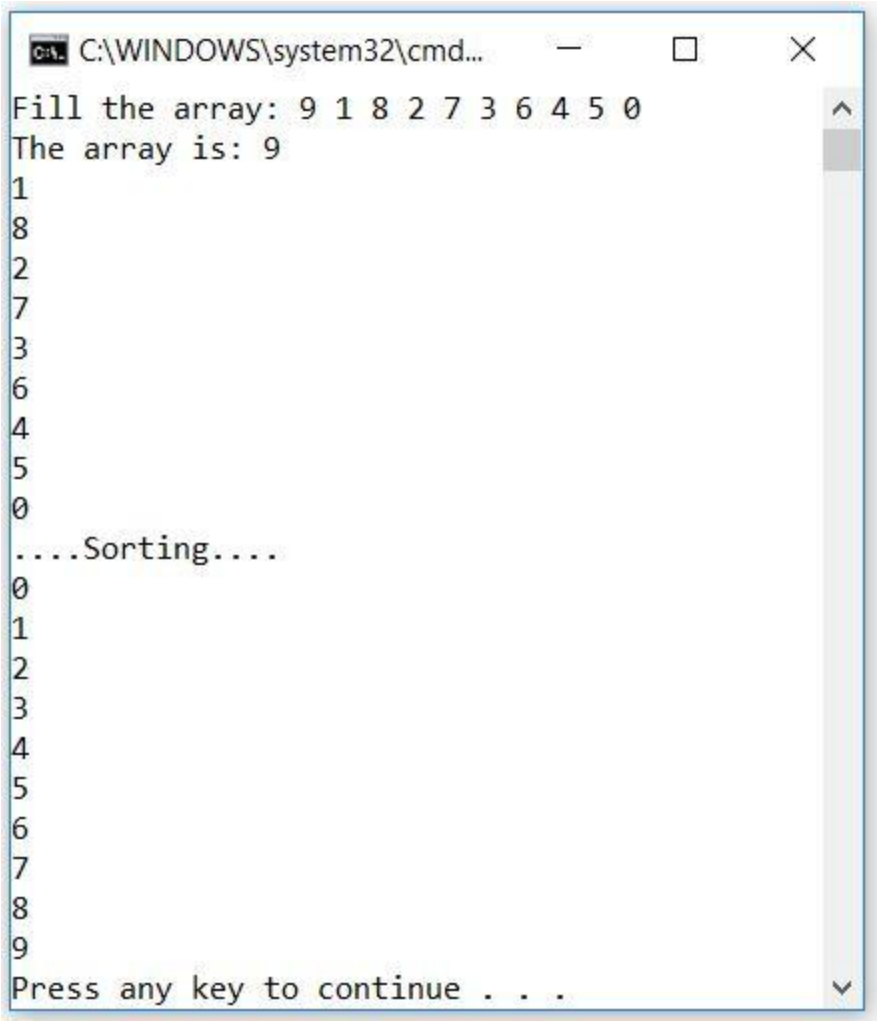
//Assignment:      Programming Assignment #1
//Date Assigned:   9/05/18
//Date due:        9/20/18
```

```
//Date handed in:  9/18/18
//Remark:          Should search for the value in the array.
#include <iostream>
#include <iomanip>
#include <cmath>
using namespace std;
void display_array(int x[], int y);
void fill_array(int x[], int y);
void sort(int x[], int y);
int main()
{
	const int SIZE = 10;
	int a[SIZE];
	cout << "Fill the array: ";
	fill_array(a, SIZE);
	cout << "The array is: ";
	display_array(a, SIZE);
	sort(a,SIZE);
	display_array(a, SIZE);
	return 0;
}
void fill_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cin >> x[i];
}
void display_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cout << x[i] << endl;
}
void sort(int x[], int y)
{
	cout << "...Sorting..." << endl;
	for (int i = 0; i < y; ++i)
	{
		int minSoFar = x[i];
		for (int j = i + 1; j < y; ++j)
		{
```

```
                    if (x[j] < minSoFar)
                    {
                        minSoFar = x[j];
                        int tmp = x[i];
                        x[i] = x[j];
                        x[j] = tmp;
                    }
                }
        }
}
```

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//Assignment:       Programming Assignment #1
//Date Assigned:    9/05/18
//Date due:         9/20/18
```
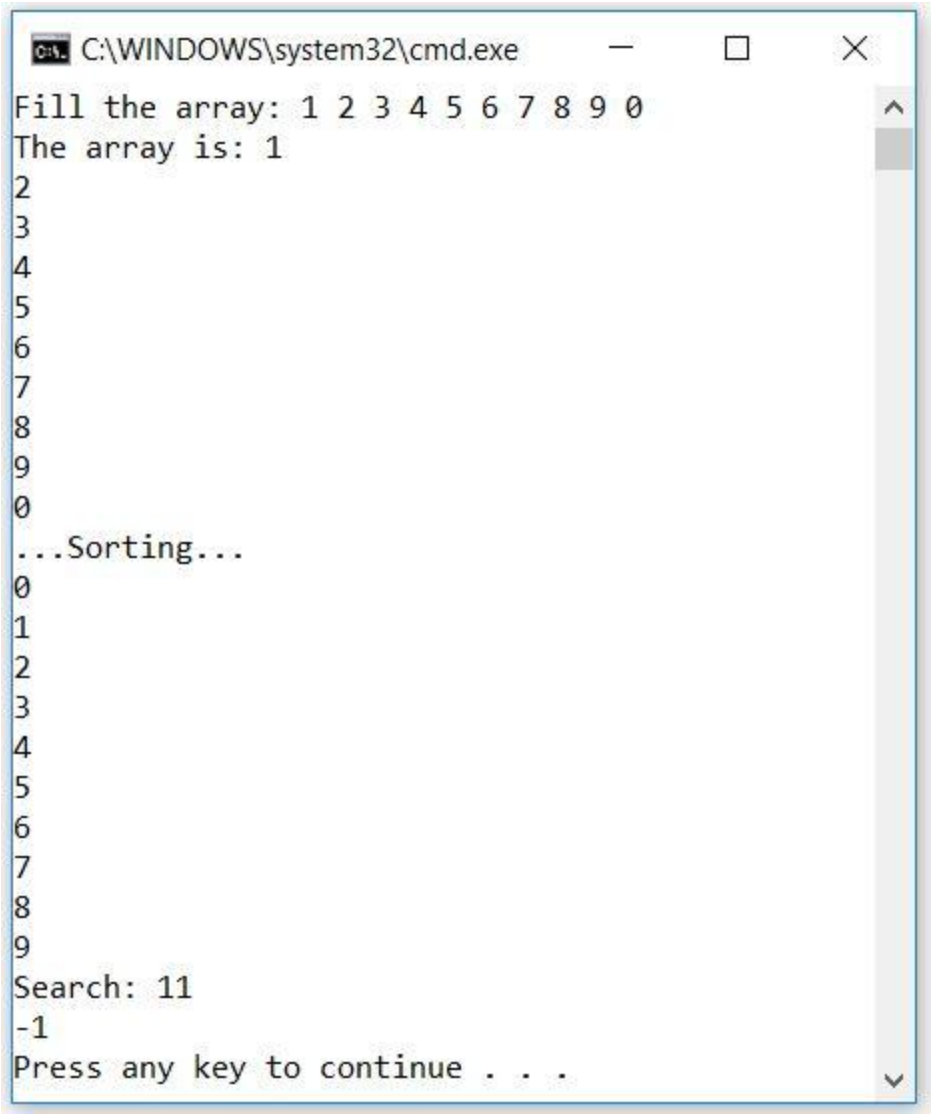
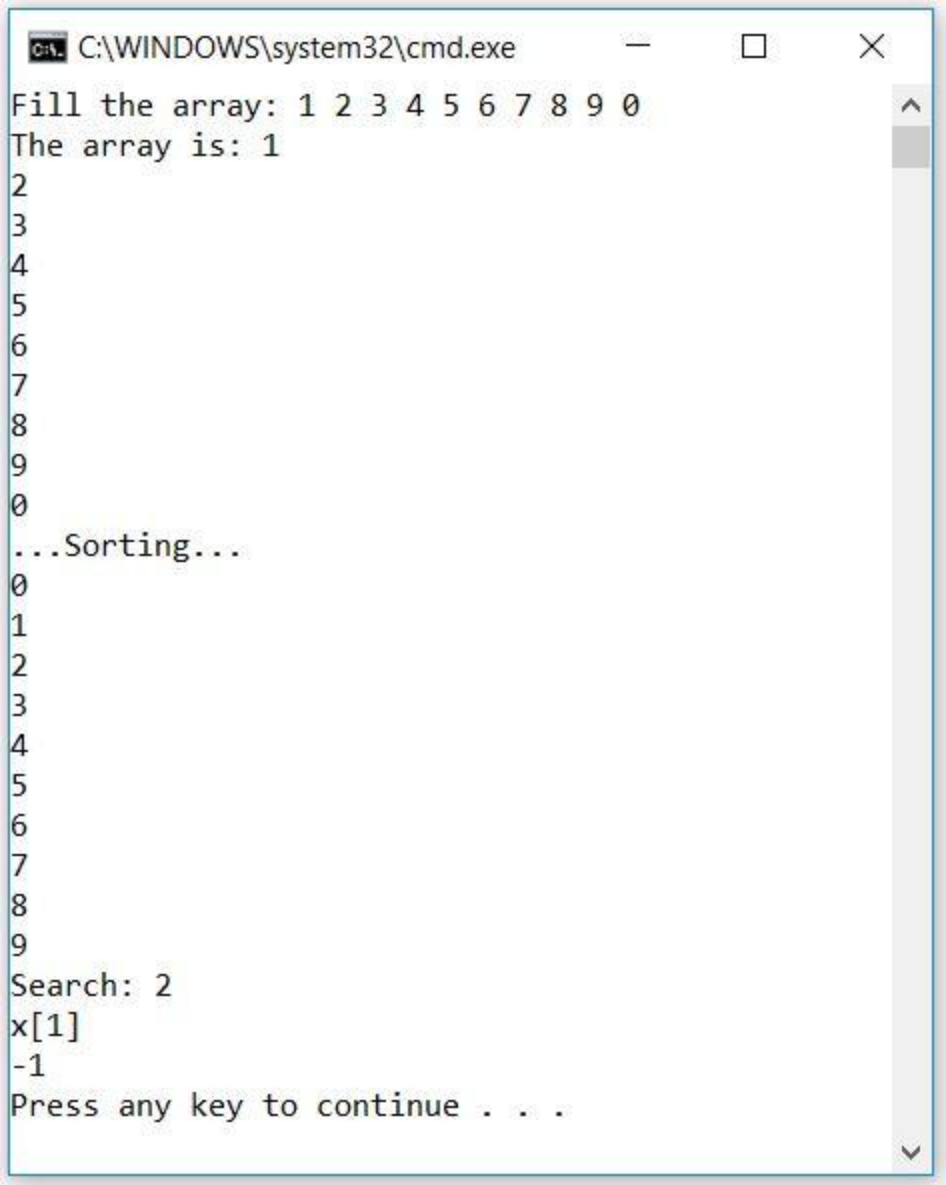

```
//Date handed in:  9/18/18
//Remark:            Should search for the value in the array.
#include <iostream>
#include <iomanip>
#include <cmath>
using namespace std;
void display_array(int x[], int y);
void fill_array(int x[], int y);
void sort(int x[], int y);
void binary_search(int x[], int y);
int main()
{
	const int SIZE = 10;
	int a[SIZE];
	cout << "Fill the array: ";
	fill_array(a, SIZE);
	cout << "The array is: ";
	display_array(a, SIZE);
	sort(a, SIZE);
	display_array(a, SIZE);
	binary_search(a, SIZE);
	return 0;
}
void fill_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cin >> x[i];
}
void display_array(int x[], int y)
{
	for (int i = 0; i < y; i++)
		cout << x[i] << endl;
}
void sort(int x[], int y)
{
	cout << "...Sorting..." << endl;
	for (int i = 0; i < y; ++i)
	{
		int minSoFar = x[i];
```

```
		for (int j = i + 1; j < y; ++j)
		{
			if (x[j] < minSoFar)
			{
				minSoFar = x[j];
				int tmp = x[i];
				x[i] = x[j];
				x[j] = tmp;
			}
		}
	}
}
void binary_search(int x[], int y)
{
	int find;
	int mid;
	bool a;
	mid = x[y / 2];
	cout << "Search: ";
	cin >> find;
	if (mid == find)
		cout << "x[" << mid - 1 << "]" << endl;
	else
	{
		for (int i = (y / 2); i > 0; i--)
		{
			if (x[i] == find)
				cout << "x[" << i - 1 << "]" << endl;
			else
				a = false;
		}
	}
	if (a == false)
		cout << "-1" << endl;
}
```


C:\WINDOWS\system32\cmd.exe
Fill the array: 1 2 3 4 5 6 7 8 9 0
The array is: 1
2
3
4
5
6
7
8
9
0
...Sorting...
0
1
2
3
4
5
6
7
8
9
Search: 11
-1
Press any key to continue . . .


C:\WINDOWS\system32\cmd.exe
Fill the array: 1 2 3 4 5 6 7 8 9 0
The array is: 1
2
3
4
5
6
7
8
9
0
...Sorting...
0
1
2
3
4
5
6
7
8
9
Search: 2
x[1]
-1
Press any key to continue . . .