Sheet 5

1. **Write a C++ program that will prompt the user to input an integer array with 5 values. Then it ask the user to enter a number to check whether or not this number is found in the array or not.**
2. **Write a C++ program that will prompt the user to input an integer array with 10 values. Then it print its maximum and minimum values.**
3. **Write a C++ program to display a matrix as shown below. The diagonal of the matrix fills with 0. The lower side fills will -1s and the upper side fills with 1s.**

	1	2	3	4	5
1	0	1	1	1	1
2	-1	0	1	1	1
3	-1	-1	0	1	1
4	-1	-1	-1	0	1
5	-1	-1	-1	-1	0

4. **What is the output of the following program segment?**

```
int temp[5];
for (int i = 0; i < 5; i++)
temp[i] = 2 * i - 3;
for (int i = 0; i < 5; i++)
cout << temp[i] << " ";
cout << endl;
temp[0] = temp[4];
temp[4] = temp[1];
temp[2] = temp[3] + temp[0];
for (int i = 0; i < 5; i++)
cout << temp[i] << " ";
cout << endl;
```

5. **What is stored in the array list after the following C++ code executes?**

```
list[0] = 5;
for (int i = 1; i < 6; i++)
{
list[i] = i * i + 5;
if (i > 2)
list[i] = 2 * list[i] - list[i - 1];
        }
```

6. **Write C++ statements to define and initialize the following arrays.**

a. Array heights of 10 components of type double. Initilaize this array to the following
values: 5.2, 6.3, 5.8, 4.9, 5.2, 5.7, 6.7, 7.1, 5.10, 6.0.

b. Array weights of 7 components of type int. Initialize this array to the following values:
120, 125, 137, 140, 150, 180, 210.