

Arrays in Fortran, C++, and Matlab

	Declaration	First	Last	Initializer
Fortran array	integer x(3)	x(1)	x(3)	data x/7,8,9/
C++ array	int x[3]	x[0]	x[2]	= {7,8,9};
Matlab Array	x=zeros(1,3)	x(1)	x(3)	= [7 8 9];
Fortran Matrix	integer m(3,2)	m(1,1)	m(3,2)	data x/9,8,7,6,5,4/
C++ Matrix	int m[3][2]	m[0][0]	m[2][1]	= { {9,6},{8,5}, {7,4} };
Matlab Matrix	x=zeros(3,2);	x(1,1)	x(3,2)	= [9 6; 8 5; 7 4]

```
//arrays basics
#include <iostream.h>

int main()
{
    const int Arraysize = 10;
    int A[Arraysize];

    for (int i=0; i<Arraysize; i++)
        A[i] = 0;

    A[0] = 3;

    for(int j=0; j<10; ++j)
        cout << A[j] << endl;

    int B[Arraysize/5] = {1,2};
    cout << B[0] << endl;
    cout << B[1] << endl;

    const int size = 2;
    int X[size][size] = { {1,2}, {3, 4} };

    return 0;
}
```

```
//reading an array from a file
int main()
{
    ifstream in;
    in.open("input.dat");
    ofstream out("output.dat");
    int x[5];
    int i = 0;
    while(1)
    {

        in >> x[i];
        if (in.eof())
            break;
        cout << x[i] << endl;
        out << x[i] << endl;
        i++;
    }

    return 0;
}
```