

# Dynamic Binding Example.

```
// Dynamic Binding

#include <iostream.h>
#include "ThreeDShape.h"
#include "Sphere.h"
#include "Cone.h"
#include "Cube.h"
#include "Cylinder.h"
#include "Pyramid.h"

#define NUMBER_OF_SHAPES 5

int main()
{
    // The nice thing about this array is that it only needs to be
    set up once.
    ThreeDShape *p3DShape[NUMBER_OF_SHAPES];

    p3DShape[0] = new Sphere();
    p3DShape[1] = new Cone();
    p3DShape[2] = new Cube();
    p3DShape[3] = new Cylinder();
    p3DShape[4] = new Pyramid();

    // Now the elements' methods of this array can be invoked
without
    // having to worry about getting the correct type.
    for (int index = 0; index < NUMBER_OF_SHAPES; index++)
    {
        cout << p3DShape[index]->GetName();
        cout << " Vol:\t";
        cout << p3DShape[index]->GetVolume();
        cout << "\tCubic Units";
        cout << endl;

        delete p3DShape[index];
    }

    return 0;
}
```

## Additional Files

[http://www.bletchleypark.net/algorithms/cone\\_cpp.txt](http://www.bletchleypark.net/algorithms/cone_cpp.txt)  
[http://www.bletchleypark.net/algorithms/cone\\_h.txt](http://www.bletchleypark.net/algorithms/cone_h.txt)  
[http://www.bletchleypark.net/algorithms/cube\\_cpp.txt](http://www.bletchleypark.net/algorithms/cube_cpp.txt)  
[http://www.bletchleypark.net/algorithms/cube\\_h.txt](http://www.bletchleypark.net/algorithms/cube_h.txt)  
[http://www.bletchleypark.net/algorithms/cylinder\\_cpp.txt](http://www.bletchleypark.net/algorithms/cylinder_cpp.txt)  
[http://www.bletchleypark.net/algorithms/cylinder\\_h.txt](http://www.bletchleypark.net/algorithms/cylinder_h.txt)  
[http://www.bletchleypark.net/algorithms/pyramid\\_cpp.txt](http://www.bletchleypark.net/algorithms/pyramid_cpp.txt)  
[http://www.bletchleypark.net/algorithms/pyramid\\_h.txt](http://www.bletchleypark.net/algorithms/pyramid_h.txt)  
[http://www.bletchleypark.net/algorithms/sphere\\_cpp.txt](http://www.bletchleypark.net/algorithms/sphere_cpp.txt)  
[http://www.bletchleypark.net/algorithms/sphere\\_h.txt](http://www.bletchleypark.net/algorithms/sphere_h.txt)

[http://www.bletchleypark.net/algorithms/threedshape\\_cpp.txt](http://www.bletchleypark.net/algorithms/threedshape_cpp.txt)  
[http://www.bletchleypark.net/algorithms/threedshape\\_h.txt](http://www.bletchleypark.net/algorithms/threedshape_h.txt)