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/*This programme shows an example of using virtual functions */
#include<iostream>

using namespace std;

class Box {

protected:

        double length, height, width;

public:

        Box(double L, double H, double W) : length(L), height(H), width(W) {};

        virtual double boxVolume() { return length * height * width; };



};

class ThickBox : public Box {

public:

        ThickBox(double L, double H, double W) :Box(L, H, W) {

                length = L; height = H; width = W;
        };


        double boxVolume() // This function overides the virtual function in the super class
        {
                return (length - 1) * (height - 1) * (width - 1);
        }

};

void main() {

        Box* px = new ThickBox(5, 2, 2); // It is allowed to use a pointer of the superclass to a
subclass object


        cout << "The size of the box is " << px->boxVolume() << endl;

        delete px;  // requires virtual destructor of the superclass to make sure it works on all
compilers without problems

        system("pause");

};
```