

## - Exercise

Let's test our knowledge of constructors with these challenges.

WE'LL COVER THE FOLLOWING ^

- Exercise

### Exercise #

Simplify the constructors of the `Widget` class in the code below. Initialize the class members.

```
#include <iostream>

class Widget{
public:

    // write simplified version of constructor here

    Widget(): width(640), height(480), frame(false), visible(true) {}

    Widget(int w): width(w), height(getHeight(w)), frame(false), visible(true){}

    Widget(int w, int h): width(w), height(h), frame(false), visible(true){}

    void show(){ std::cout << std::boolalpha << width << "x" << height
                        << ", frame: " << frame << ", visible: " << visible
                        << std::endl;
    }
private:
    int getHeight(int w){ return w*3/4; }
    int width;
    int height;
    bool frame;
    bool visible;
};

int main(){

    std::cout << std::endl;

    Widget wVGA;
    Widget wSVGA(800);
    Widget wHD(1280, 720);
```

```
wVGA.show();  
wSVGA.show();  
wHD.show();  
  
std::cout << std::endl;  
  
}
```



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Find out the solution in the next lesson.