

**EXAMPLE 12:**

**THE PLACEMENT NEW OPERATOR**

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THIS IS A VARIATION OF **new**, WHICH THAT ENSURES THAT AN OBJECT RESIDES AT A SPECIFIC MEMORY LOCATION (LIKE WITH **malloc**)

PLACEMENT NEW TAKES IN THE MEMORY LOCATION AS A PARAMETER

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```
int main()
{
    char memoryBuffer[sizeof(ComplexNumber)];
    void *place = (void*)memoryBuffer;

    ComplexNumber * cPlacedNew = new(place) ComplexNumber(10,5);
    cout << "Printing out dynamically allocated object that used placement new" << endl;
    cPlacedNew->print();

    // Now need to explicitly call the destructor when using placement new
    cPlacedNew->~ComplexNumber();

    cout<<"Okey-dokey! All done!"<<endl;

}
```



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USING `sizeof`

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TO EXPLICITLY CALL **THE DESTRUCTOR!**

DON'T USE PLACEMENT `new` UNLESS YOU ABSOLUTELY  
HAVE TO (EG IN HARDWARE APPLICATIONS)