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[NPTEL \(https://swayam.gov.in/explorer?ncCode=NPTEL\)](https://swayam.gov.in/explorer?ncCode=NPTEL) » Programming in Modern C++ (course)

## Course outline

How does an NPTEL  
online course work? ()

Week 0 ()

Week 1 ()

Week 2 ()

Week 3 ()

## W10\_Programming\_Qs-2

Due on 2023-04-06, 23:59 IST

Consider the following program (in C++11). Fill in the blanks as per the instructions given below:

- Fill in the blanks at LINE-1 and LINE-2 with appropriate headers for the definition of function `getValue()` belongs to class `Gram` and class `KiloGram`.
- Fill in the blank at LINE-3 with appropriate template definition.
- Fill in the blank at LINE-4 with appropriate header for function `convert_weight`.

Your last recorded submission was on 2023-04-04, 20:56 IST

Select the Language for this assignment. C++ ▾

```
1 #include <iostream>
2
3 class KiloGram;
4 class Gram{
5     public:
```



**Week 4 ()****Week 5 ()****Week 6 ()****Week 7 ()****Week 8 ()****Week 9 ()****Week 10 ()**

- Lecture 46 : C++11 and beyond: General  
Features: Part 1 (unit? unit=112&lesson=113)
- Lecture 47 : C++11 and beyond: General  
Features: Part 2 (unit? unit=112&lesson=114)
- Lecture 48 : C++11 and beyond: General  
Features: Part 3 (unit? unit=112&lesson=115)
- Lecture 49 : C++11 and beyond: General  
Features: Part 4: Rvalue and Move/1 (unit? unit=112&lesson=116)
- Lecture 50 : C++11 and beyond: General

```

6         Gram(double w) : w_(w) { }
7         KiloGram getValue();
8         void print(){ std::cout << w_ << "G "; }
9     private:
10        double w_;
11    };
12
13    class KiloGram{
14    public:
15        KiloGram(double w) : w_(w) { }
16        Gram getValue();
17        void print(){ std::cout << w_ << "KG "; }
18    private:
19        double w_;
20    };
21
22    KiloGram Gram::getValue() {
23        return KiloGram(w_ / 1000); } //LINE-1
24
25    Gram KiloGram::getValue() {
26        return Gram(w_ * 1000); } //LINE-2
27
28    KiloGram convert_weight(Gram w){
29        return w.getValue(); //LINE-3
30    } //LINE-4
31    Gram convert_weight(KiloGram w){
32        return w.getValue();
33    }
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```

0 int main(){
1     double a, b;
2     std::cin >> a >> b;
3     Gram o1(a);
4     KiloGram o2(b);
5     convert_weight(o1).print();
6     convert_weight(o2).print();
7     return 0;
8 }

```



Features: Part 5: Rvalue  
and Move/2 (unit?  
unit=112&lesson=117)

- ☐ Tutorial 10 : How to  
optimize C++11 programs  
using Rvalue and Move  
Semantics? (unit?  
unit=112&lesson=118)
- ☒ Week 10 Lecture Material  
(unit?  
unit=112&lesson=119)
- ☒ Quiz: Week 10 :  
Assignment 10  
(assessment?name=208)
- ☒ W10\_Programming\_Qs-1  
(/noc23\_cs50/progassignment?  
name=209)
- ☒ **W10\_Programming\_Qs-  
2**  
(/noc23\_cs50/progassignment?  
name=210)
- ☐ W10\_Programming\_Qs-3  
(/noc23\_cs50/progassignment?  
name=211)
- ☐ Week 10 Feedback Form  
(unit?  
unit=112&lesson=120)

**Week 11 ()**

**Download Videos ()**

8 }

You may submit any number of times before the due date. The final submission will be considered for grading.

**This assignment has Public Test cases. Please click on "Compile & Run" button to see the status of Public test cases. Assignment will be evaluated only after submitting using Submit button below. If you only save as or compile and run the Program , your assignment will not be graded and you will not see your score after the deadline.**

Save as Draft

Compile & Run

Submit

Reset

### Private Test cases used for Evaluation

### Status

#### Test Case 1

Passed



**Books ()**

**Transcripts ()**

**Problem Solving  
Session ()**

