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[NPTEL \(https://swayam.gov.in/explorer?ncCode=NPTEL\)](https://swayam.gov.in/explorer?ncCode=NPTEL) » **Programming in C++ (course)**
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W7_Programming-Qs2

Due on 2020-11-05, 23:59 IST

Consider the following program. Fill in the blanks at LINE-1 with appropriate abstract function definition for function fun(), and LINE-2, LINE-3 and LINE-4 with appropriate inheritance such that it matches the given test cases.

Private Test cases used for evaluation

Input Expected Output Actual Output Status

Test Case 1

1
0

100 20 0

100 20 0

Passed

The due date for submitting this assignment has passed.

1 out of 1 tests passed.

You scored 100.0/100.

Assignment submitted on 2020-11-05, 23:22 IST

Your last recorded submission was :

```

1 #include <iostream>
2 using namespace std;
3
4 class A {
5 protected:
6     int i;
7 public:
8     A(int a = 0) : i(a) { }
9     void set(int a) {
10         i = a;
11         cout << i << " ";
12     }
13     // create abstract function fun()
14     virtual void fun()=0; // LINE-1
15 };
16
17 class B : public A { // LINE-2
18 public:
19     B(int a = 0) : A(a) { }
20     void fun() { set(i * 10); }
```

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

☐ Module 31 :
Virtual Function
Table (Lecture
46) (unit?
unit=80&lesson=81)

☐ Module 32 : Type
Casting and Cast
Operators : Part I
(Lecture 47)

(unit?
unit=80&lesson=82)

- Module 33 : Type Casting and Cast Operators : Part II (Lecture 48) (unit? unit=80&lesson=83)

- Module 34 : Type Casting and Cast Operators : Part III (Lecture 49) (unit? unit=80&lesson=84)

- Module 35 : Multiple Inheritance (Lecture 50) (unit? unit=80&lesson=85)

- Module 35 : Multiple Inheritance (Contd.) (Lecture 51) (unit? unit=80&lesson=86)

- Lecture Materials (unit? unit=80&lesson=87)

- Quiz : Assignment 7 (assessment? name=170)

- W7_Programming-Qs1 (/noc20_cs57/progassignment? name=171)

- W7_Programming-Qs2 (/noc20_cs57/progassignment? name=172)

- W7_Programming-Qs3 (/noc20_cs57/progassignment? name=173)

- W7_Programming-Qs4 (/noc20_cs57/progassignment? name=174)

```

21 };
22
23 class C : public A { // LINE-3
24 public:
25     C(int a = 0) : A(a) { }
26     void fun() { set(i + 10); }
27 };
28
29 class D : public A { // LINE-4
30 public:
31     D(int a = 0) : A(a) { }
32     void fun() { set(i - 10); }
33 };
34
35 int main() {
36     int num;
37     cin >> num;
38
39     A *pt[3] = { new B(num), new C(num), new D(num) };
40     for (int i = 0; i < 3; i++) {
41         pt[i]->fun();
42     }
43
44     return 0;
45 }

```

☐ Feedback For
Week 7 (unit?
unit=80&lesson=88)

Week 8

**DOWNLOAD
VIDEOS**

Text Transcripts

**Assignment
Solution**

Books

**Live Interactive
Session**

**Programming Test
(11th Dec):
Session-1
(10.00AM -
11.00AM)**

**Programming Test
(11th Dec):
Session-2 (8.00PM
- 9.00PM)**