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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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[Progress \(student/home\)](#) [Mentor \(student/mentor\)](#)

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

- Module 21 :
Inheritance : Part I (Lecture 36)
(unit?
unit=64&lesson=65)
- Module 22 :
Inheritance : Part II (Lecture 37)
(unit?
unit=64&lesson=66)
- Module 23 :
Inheritance : Part III (Lecture 38)

W5_Programming-Qs3

Due on 2020-10-22, 23:59 IST

Consider the following program. Fill in the blank at LINE-1 such that global function `vehicleDetails` can access private member of class `Vehicle`. Fill in the blank at LINE-2 and LINE-3 to call constructor of `Vehicle` class. The program must satisfy the given test cases.

Private Test cases used for evaluation

Input	Expected Output	Actual Output	Status
Test Case 1	Cycle: Two Wheeler	Cycle: Two Wheeler	Passed

The due date for submitting this assignment has passed.

1 out of 1 tests passed.

You scored 100.0/100.

Assignment submitted on 2020-10-22, 23:40 IST

Your last recorded submission was :

```

1 #include <iostream>
2
3 #include <string>
4
5 using namespace std;
6
7 class Vehicle {
8     string vehicleName;
9
10    int noOfWheels;
11
12 protected:
13     Vehicle(string s, int w) : vehicleName(s), noOfWheels(w) { }
14 public:
15     friend void vehicleDetails(const Vehicle&); // LINE-1
16 };
17
```

(unit?
unit=64&lesson=67)

Module 24 :
Inheritance : Part
IV (Lecture 39)
(unit?
unit=64&lesson=68)

Module 25 :
Inheritance : Part
V (Lecture 40)
(unit?
unit=64&lesson=69)

Lecture Materials
(unit?
unit=64&lesson=70)

Quiz :
Assignment 5
(assessment?
name=153)

W5_Programming-
Qs1
(/noc20_cs57/progassignment?...
name=149)

W5_Programming-
Qs2
(/noc20_cs57/progassignment?
name=156)

W5_Programming-
Qs3
(/noc20_cs57/progassignment?
name=157)

Feedback For
Week 5 (unit?
unit=64&lesson=71)

Week 6

Week 7

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Text Transcripts

Assignment Solution

Books

```

18 class Twowheeler : public Vehicle { public:
19
20     Twowheeler(string n) : Vehicle(n,2) { }           // LINE-2
21 };
22
23 class Threewheeler : public Vehicle { public:
24
25     Threewheeler(string n) : Vehicle(n,3) { }         // Line-3
26 };
27 void vehicleDetails(const Vehicle &v) {
28     cout << v.vehicleName << ": ";
29     if (v.noOfWheels == 2)
30         cout << "Two Wheeler";
31     else
32         cout << "Three Wheeler";
33 }
34
35 int main() {
36     string s;
37     int n;
38     Vehicle *v;
39
40     cin >> s >> n;
41
42     if (n == 2)
43         v = new Twowheeler(s);
44     else
45         v = new Threewheeler(s);
46
47     vehicleDetails(*v);
48
49     return 0;
50 }

```

**Live Interactive
Session**