

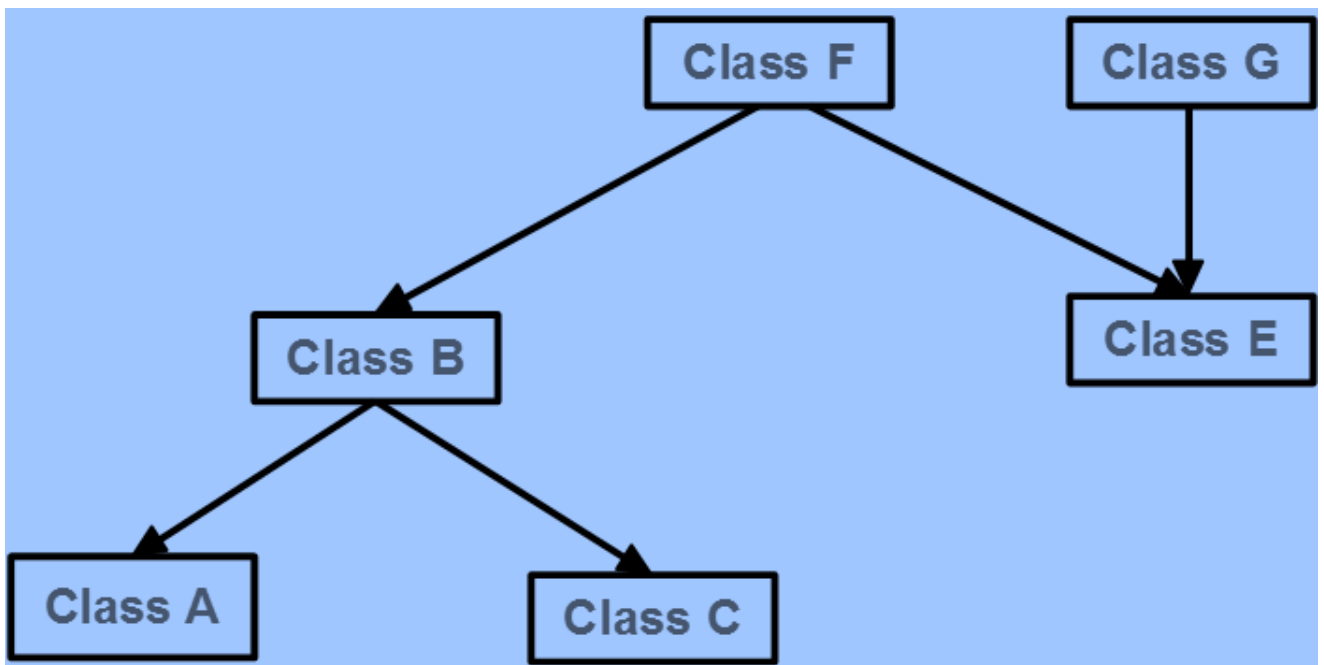
EXPERIMENT NUMBER –Practical 5

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DOF – 31/MARCH/2021

TOPIC OF EXPERIMENT

– AIM OF THE EXPERIMENT Design a class named Vehicles and fares with its data members and member functions declared in private section of the class using hybrid inheritance.

FLOWCHART/ ALGORITHM



PROGRAM CODE IN TEXT FORM -

```
#include <iostream>
using namespace std;

// base class
class Vehicle
{
public:
    Vehicle()
    {
        cout << "This is a Vehicle" << endl;
    }
};

// first sub class
class Car: public Vehicle
{

};

// second sub class
class Bus: public Vehicle
{

};

// main function
int main()
{
    // creating object of sub class will
    // invoke the constructor of base class
    Car obj1;
    Bus obj2;
    return 0;
}
```

PROGRAM CODE IN COMPILER –

```
main.cpp
2
3 #include <iostream>
4 using namespace std;
5
6 // base class
7 class Vehicle
8 {
9 public:
10     Vehicle()
11     {
12         cout << "This is a Vehicle" << endl;
13     }
14 };
15
16 //base class
17 class Fare
18 {
19     public:
20     Fare()
21     {
22         cout<<"Fare of Vehicle\n";
23     }
24 };
25
26 // first sub class
27 class Car: public Vehicle
28 {
29
30 };
31
32 // second sub class
33 class Bus: public Vehicle, public Fare
34 {
35
36 };
37
38 // main function
39 int main()
40 {
41     // creating object of sub class will
42     // invoke the constructor of base class
43     Bus obj2;
44     return 0;
45 }
46
```

ERRORS ENCOUNTERED DURING PROGRAM'S EXECUTION

(Kindly jot down the compile time errors encountered)

IF WE FORGET THE SEMICOLON (;)-

```
main.cpp
1
2
3 #include <iostream>
4 using namespace std;
5
6 // base class
7 class Vehicle
8 {
9 public:
10 Vehicle()
11 {
12 cout << "This is a Vehicle" << endl;
13 }
14 };
15
16 //base class
17 class Fare
18 {
19 public:
20 Fare()
21 {
22 cout<<"Fare of Vehicle\n"
23 }
```

Input stderr

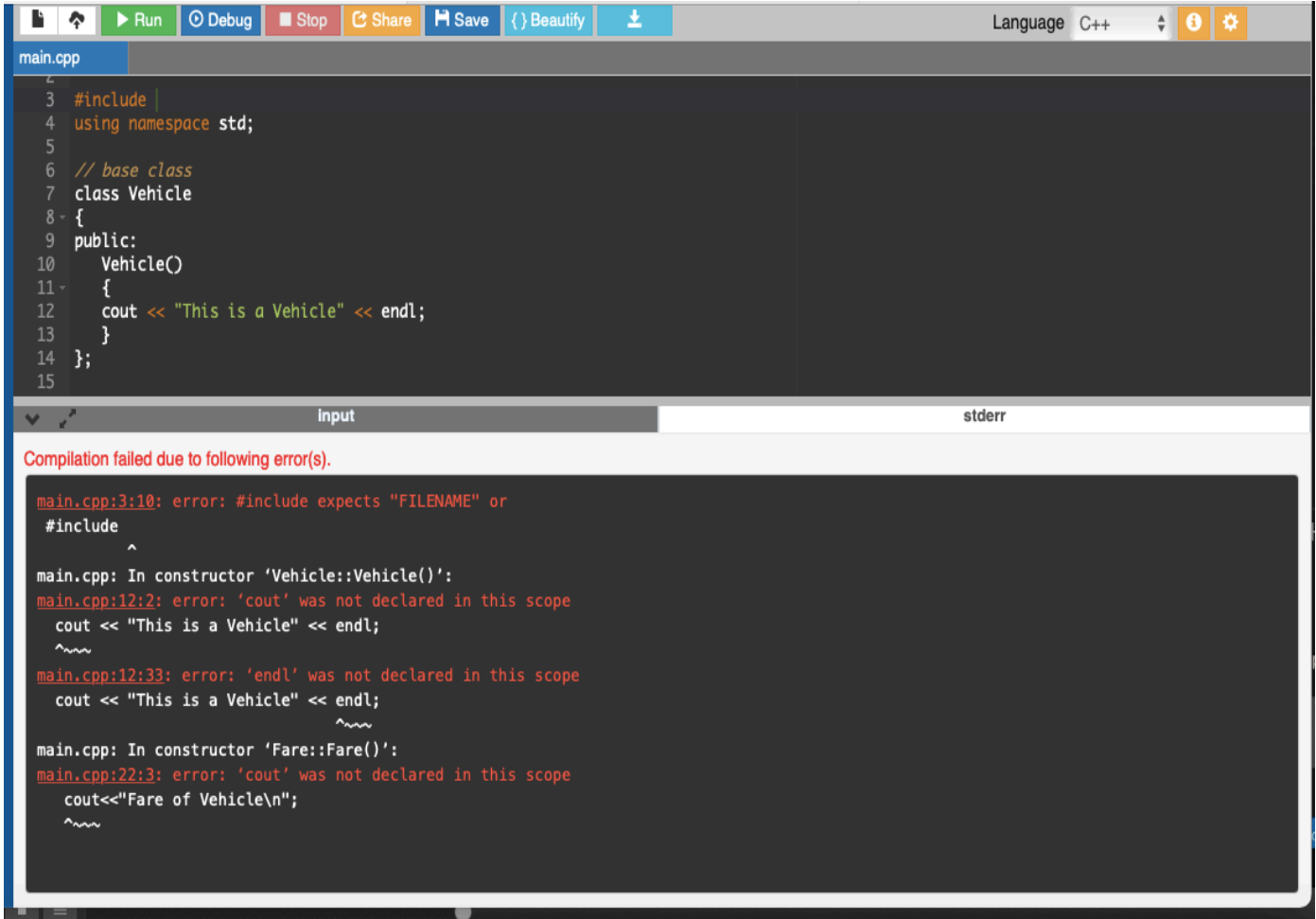
Compilation failed due to following error(s).

```
main.cpp: In constructor 'Fare::Fare()':
main.cpp:23:2: error: expected ';' before '}' token
    }
    ^
```

ERRORS ENCOUNTERED DURING PROGRAM'S EXECUTION

(Kindly jot down the compile time errors encountered)

IF WE FORGET THE HEADER FILE -



```
main.cpp
2
3 #include
4 using namespace std;
5
6 // base class
7 class Vehicle
8 {
9 public:
10 Vehicle()
11 {
12 cout << "This is a Vehicle" << endl;
13 }
14 };
15
```

Compilation failed due to following error(s).

```
main.cpp:3:10: error: #include expects "FILENAME" or
#include
^
main.cpp: In constructor 'Vehicle::Vehicle()':
main.cpp:12:2: error: 'cout' was not declared in this scope
cout << "This is a Vehicle" << endl;
^~~~
main.cpp:12:33: error: 'endl' was not declared in this scope
cout << "This is a Vehicle" << endl;
^~~~
main.cpp: In constructor 'Fare::Fare()':
main.cpp:22:3: error: 'cout' was not declared in this scope
cout<<"Fare of Vehicle\n";
^~~~
```

PROGRAMS' EXPLANATION (in brief) -

Design a class named Vehicles and fares with its data members and member functions declared in private section of the class using hybrid inheritance.

OUTPUT OF THE PROGRAM -

```
This is a Vehicle
Fare of Vehicle

...Program finished with exit code 0
Press ENTER to exit console.
```

LEARNING OUTCOMES

- Identify situations where computational methods would be useful.
- Approach the programming tasks using techniques learnt and write pseudo-code.
- Choose the right data representation formats based on the requirements of the problem.
- Use the comparisons and limitations of the various programming constructs and choose the right one for the task.

EVALUATION COLUMN (To be filled by concerned faculty only)

Sr. No.	Parameters	Maximum Marks	Marks Obtained
1.	Worksheet Completion including writing learning objective/ Outcome	10	
2.	Post Lab Quiz Result	5	
3.	Student engagement in Simulation/ Performance/ Pre Lab Questions	5	
4.	Total Marks	20	



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