**LAB 8:  
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**PRACTICE TASK 1:  
CODE:**

#include<iostream>

using namespace std;

class Car

{

protected:

string car\_name;

int speed;

public:

Car()

{

car\_name = "";

speed = 0;

}

Car(string name, int s)

{

car\_name = name;

speed = s;

}

void set\_name(string name)

{

car\_name = name;

}

void set\_speed(int s)

{

speed = s;

}

string get\_name()

{

return car\_name;

}

int get\_speed()

{

return speed;

}

void display()

{

cout << " Call to base class : " << endl;

cout << " Car name: " << car\_name << endl;

cout << " Car speed: " << speed << endl;

}

};

class convertible :public Car

{

protected:

bool top;

public:

convertible()

{

top = false;

}

convertible(string name, int s, bool t)

{

car\_name = name;

speed = s;

top = t;

}

void set\_top(bool t)

{

top = t;

}

void show()

{

cout << " Call to derived class : " << endl;

cout << endl;

cout << " Car name: " << car\_name << endl;

cout << " Speed: " << speed << endl;

cout << " Top: " << top << endl;

}

};

int main()

{

Car c1;

c1.display();

c1.set\_name("honda");

c1.set\_speed(140);

c1.display();

cout << " Car name :" << c1.get\_name() << endl;

cout << " Car speed :" << c1.get\_speed() << endl;

Car c2("suzuki", 123);

c2.display();

c2.set\_name("civic");

c2.set\_speed(240);

c2.display();

convertible o1;

o1.show();

convertible o2("carrydaba", 120, true);

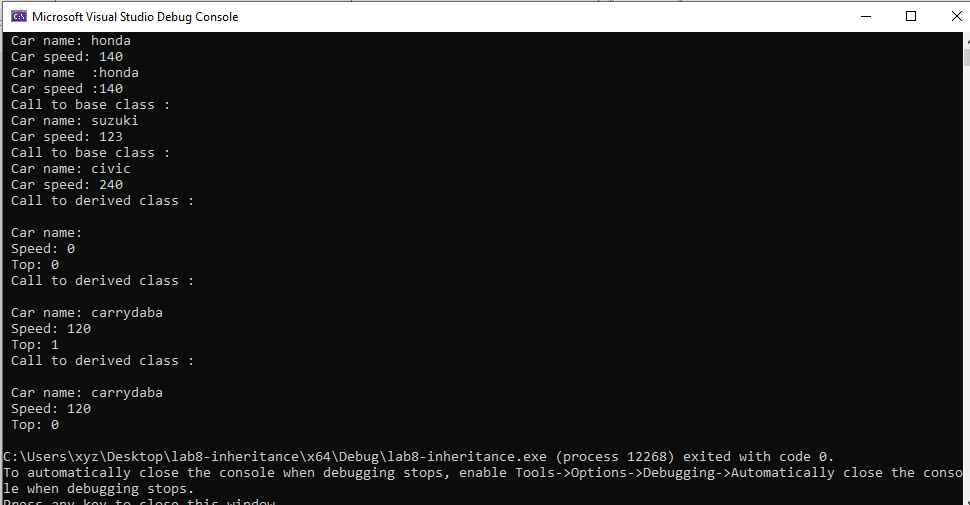
o2.show();

o2.set\_top(false);

o2.show();

}

**OUTPUT:**

****

**PRACTICE TASK 2:**

**CODE:**

#include<iostream>

using namespace std;

class company

{

protected:

string c\_name;

int c\_id;

public:

company()

{

c\_name = "";

c\_id = 0;

}

company(string name, int id)

{

c\_name = name;

c\_id = id;

}

void set\_name(string name)

{

c\_name = name;

}

void set\_id(int id)

{

c\_id = id;

}

string get\_name()

{

return c\_name;

}

int get\_id()

{

return c\_id;

}

void display()

{

cout << " Call to base class " << endl;

cout << " Company name " << c\_name << endl;

cout << " Id " << c\_id << endl;

}

};

class mobile\_phone :public company

{

protected:

string m\_name;

int m\_id;

int m\_price;

public:

void set\_Mname(string name)

{

m\_name = name;

}

void set\_Mid(int id)

{

m\_id = id;

}

void set\_Mprice(int pr)

{

m\_price = pr;

}

string get\_Mname()

{

return m\_name;

}

int get\_Mid()

{

return m\_id;

}

int get\_Mprice()

{

return m\_price;

}

void show()

{

cout << " Call to derived class " << endl;

cout << " Mobile name: " << m\_name << endl;

cout << " Mobile id: " << m\_id << endl;

cout << " Mobile price: " << m\_price << endl;

cout << " Company name: " << c\_name << endl;

cout << " Company id: " << c\_id << endl;

}

};

class laptop :public company

{

protected:

string l\_name;

public:

void set\_Lname(string name)

{

l\_name = name;

}

string get\_Lname()

{

return l\_name;

}

void show()

{

cout << " Call to derived class " << endl;

cout << " Laptop name: " << l\_name << endl;

cout << " Company name: " << c\_name << endl;

cout << " Company id: " << c\_id << endl;

}

};

void main()

{

mobile\_phone obj1;

obj1.set\_id(3344);

obj1.set\_name("movers");

obj1.set\_Mname("samsung");

obj1.set\_Mid(1789);

obj1.set\_Mprice(20000);

obj1.show();

laptop obj2;

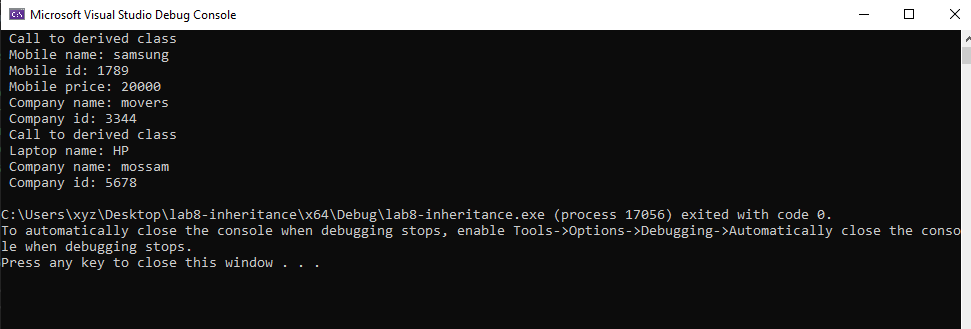
obj2.set\_id(5678);

obj2.set\_name("mossam");

obj2.set\_Lname("HP");

obj2.show();

}

**OUTPUT:  
**

**PRACTICE TASK 3:**

**CODE:**

class cafe\_service

{

protected:

string order\_id;

double price;

public:

cafe\_service()

{

order\_id = "ord#0";

price = 0.0;

}

cafe\_service(string id, double pr)

{

order\_id = id;

price = pr;

}

};

class staff\_service :public cafe\_service

{

protected:

double service\_fee;

int cabin\_num;

double total\_charges;

public:

staff\_service(double fee, int c\_n,string id,double pr)

{

service\_fee = fee;

cabin\_num = c\_n;

order\_id = id;

price = pr;

}

double Total\_charges()

{

total\_charges = service\_fee + price;

return total\_charges;

}

void display()

{

cout << " Order id: " << order\_id << endl;

cout << " Price: " << price << endl;

cout << " Service fee: " << service\_fee << endl;

cout << " Cabin number: " << cabin\_num << endl;

cout << " Total charges: " << total\_charges << endl;

}

};

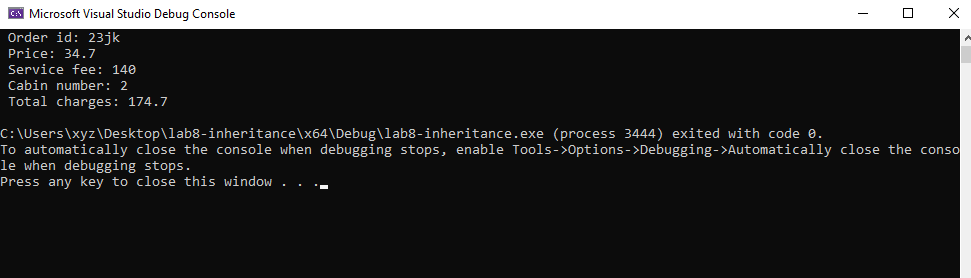
void main()

{

staff\_service obj(140.0, 2, "23jk", 34.7);

obj.Total\_charges();

obj.display();

} **OUTPUT:  
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