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Q.1

```
#include <iostream>
```

```
class SimpleClass {
```

```
pub
```

```
public:
```

```
    std::string name = "SimpleClass";
```

```
    void printName() {
```

```
        std::cout << "I am a " <<
```

```
        name << std::endl;
```

```
    }
```

```
};
```

```
int main() {
```

```
    SimpleClass* simple_class = new SimpleClass();
```

```
    simple_class->printName();
```

```
    delete simple_class;
```

```
    return 0;
```

```
}
```

Output

→ I am a SimpleClass

Q.2

```
#include <iostream>
```

```
using namespace std;
```

```
class Class1
```

```
{  
    public:
```

```
        void hello() {
```

```
            cout << "Hello" << endl;
```

```
        }
```

```
};
```

```
int main() {
```

```
    Class* _class = new Class();
```

```
    _class->hello();
```

```
    delete _class;
```

```
    return 0;
```

```
}
```

Output

↳ Hello.

Q3 #include <string>

#include <iostream>

using namespace std;

class student {

private:

string name;

int sem;

public:

void getDetails() {

cout << "Enter name: ";

cin >> name;

cout << "Enter semester: ";

cin >> sem;

}

void printDetails() {

cout << "Name: " << name << endl;

cout << "Semester: " << sem << endl;

}

};

int main() {

student *stu = new student();

stu->getDetails();

stu->printDetails();

delete stu;

return 0;

}

Output

↳ Enter name : banik

→ Enter semester : 4

→ Name : banik

Semester : 4

Q.4

```
#include <iostream>
```

```
using namespace std;
```

```
struct phoneNum {
```

```
    int part1, part2, part3;
```

```
};
```

```
int main() {
```

```
    phoneNum* phone = new phoneNum();
```

```
    cout << "Enter phone number : ";
```

```
    cin >> phone->part1 >> phone->part2 >> phone->part3;
```

```
    cout << "Phone number : " << phone->part1 << "-"
```

```
    << phone->part2 << "-"
```

```
    << phone->part3 << endl;
```

```
    delete phone;
```

```
    return 0;
```

Output

↳ Enter phone number : 798 123 3139

→ Phone number : 798-123-3139

Q.5

```
#include <iostream>
```

```
using namespace std;
```

```
class workingClass {
```

```
private:
```

```
    string name = "working class";
```

```
public:
```

```
    void printName() {
```

```
        cout << "I am a " << name << endl;
```

```
    }
```

```
};
```

```
int main() {
```

```
    workingClass* working_class = new workingClass();
```

```
    working_class->printName();
```

```
    delete working_class;
```

```
    return 0;
```

```
}
```

Output

↳ I am a workingClass.

Q.6

```
#include <iostream>
```

```
using namespace std;
```

```
class student {
```

```
private:
```

```
    string name;
```

```
    int sem;
```

```
public:
```

```
    void getDetails() {
```

```
        cout << "Enter name: ";
```

```
        cin >> name;
```

```
        cout << "Enter semester: ";
```

```
        cin >> sem;
```

```
    }
```

```
    void printDetails() {
```

```
        cout << "\nName: " << name << endl;
```

```
        cout << "Semester: " << sem << endl;
```

```
    }
```

```
};
```

```
int main() {
```

```
    int n;
```

```
    cout << "Enter number of students: ";
```

```
    cin >> n;
```

```
    student students[n];
```

```
    for (int i = 0; i < n; i++) {
```

```
        students[i].getDetails();
```

```
    }
```

```
    cout << "Student Details: \n";
```

```
    for (int j = 0; j < n; j++) {
```

```
        students[j].printDetails();
```

```
    }
```

```
    return 0;
```

```
}
```


Output

↳ Enter number of students : 2

→ Enter name : stu1

→ Enter semester : 3

→ Enter name : stu2

→ Enter semester : 4

→ Student Details :

Name : stu1

semester : 3

Name : stu2

Semester : 4

Q.7

```
#include <iostream>
```

```
using namespace std;
```

```
class rectangle
```

```
private:
```

```
int length;
```

```
int breadth;
```

```
public:
```

```
void getData() {
```

```
    cout << "Enter length: ";
```

```
    cin >> length;
```

```
    cout << "Enter breadth: ";
```

```
    cin >> breadth;
```

```
}
```

```
int area() {
```

```
    return length * breadth;
```

```
}
```

```
};
```

```
int main() {
```

```
    rectangle rectangles[3];
```

```
    for (int i = 0; i < 3; i++) {
```

```
        rectangles[i].getData();
```

```
    }
```

```
    for (int j = 0; j < 3; j++) {
```

```
        cout << "Area: " << rectangles[j].area() << endl;
```

```
    }
```

```
    return 0;
```

```
}
```


Output

→ Enter length: 3

→ Enter breadth: 2

→ Enter length: 1

→ Enter breadth: 123

→ Area: 6

→ Area: 123

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Qaur