

Suppose that class `Foo` has a default constructor, a copy constructor, and an assignment operator. In the following program fill in the blanks by indicating which methods (A, B, C, D) are called on each line of code. In some cases multiple methods are called on the same line.

- A. default constructor
- B. copy constructor
- C. assignment operator
- D. none of the above

```
Foo DoSome( Foo a ) {  
    Foo b = a; _____  
    return b; _____  
}
```

```
Foo & DoMore( Foo & a ) {  
    return a; _____  
}
```

```
int main() {  
    Foo x; _____  
    Foo y(x); _____  
    x = y; _____  
    y = DoSome( x ); _____  
    Foo s = DoMore( y ); _____  
    return 0;  
}
```

What is the output of the following program?

```
class A {
public:
    A() {
        Print("A");
    }
    ~A() {
        Print( "~A" );
    }

protected:
    void Print(const char * msg) {
        cout << msg << endl;
    }
};

class B : public A {
public:
    B() {
        Print("B");
    }
    ~B() {
        Print( "~B" );
    }
};

class C : public B {
public:
    C() {
        Print("C");
    }
    ~C() {
        Print( "~C" );
    }
};

int main() {
    C x;
    return 0;
}
```

What is the output of the following program?

```
void Print(const char * msg) {
    cout << msg << endl;
}

class C {
public:
    C() {
        Print("C");
    }
    ~C() {
        Print( "~C" );
    }
};

class B {
private:
    C c;

public:
    B() {
        Print("B");
    }
    ~B() {
        Print( "~B" );
    }
};

class A {
private:
    B b;

public:
    A() {
        Print("A");
    }
    ~A() {
        Print( "~A" );
    }
};

int main() {
    A x;
    return 0;
}
```