《 정보처리기사 Java 디테일 》
업캐스팅 형태 살펴보기

```
public class MainClass {
    public static void main(String[] args) {
        A b = new B();
        b.paint();
        b.draw();
    }
}

class A {
    public void paint() {
        System.out.print("A");
        draw();
    }

    public void draw() {
        System.out.print("B");
        draw();
    }
}

class B extends A {
    public void paint() {
        super.draw();
        System.out.print("C");
        this.draw();
    }

    public void draw() {
        System.out.print("D");
    }
}
```

정답: BDCDD

```
public class MainClass {
    public static void main(String[] args) {
        A a = new A();
        A b = new B();

        b.paint();
        b.draw();
    }
}
class A {
    public A() {
        System.out.println("Constructor of A");
    }
    public void paint() {
        System.out.print("A");
        draw();
    }
    public void draw() {
        System.out.print("B");
        draw();
    }
}
class B extends A {
 public B() {
     System.out.println("Constructor of B");
 }
 public void paint() {
     super.draw();
     System.out.print("C");
     this.draw();
 }
 public void draw() {
     System.out.print("D");
   }
}
```

정답:

Constructor of A
Constructor of A
Constructor of B
BDCDD

```
public class MainClass {
	public static void main(String[] args) {
		// A a = new A();
		A b = new B();

		b.paint();
		b.draw();
	}
}
class A {
	public A() {
		System.out.println("Constructor of A");
	}

	public void paint() {
		System.out.print("A");
		draw();
	}
	public void draw() {
		System.out.print("B");
		draw();
	}
}
class B extends A {
	public B() {
		System.out.println("Constructor of B");
	}
	public void paint() {
		super.draw();
		System.out.print("C");
		this.draw();
	}
	// public void draw() {
	// System.out.print("D");
	// }
}
```

정답:

Constructor of A

Constructor of B

BBBBBBBB… 무한 B 출력

```
public class MainClass {
    public static void main(String[] args) {
        A b = new B();
        b.paint();
        b.draw();
    }
}

class A {
    public A() {
        System.out.println("Constructor of A");
    }

    public void paint() {
        System.out.print("A");
        draw();
    }

    public void draw() {
        System.out.print("B");
        draw();
    }
}
class B extends A {
    public B() {
        super.paint();
    }

    public void paint() {
        System.out.print("C");
    }

    public void draw() {
        System.out.print("D");
    }
}
```

정답:

Constructor of A

ADCD

```
public class MainClass {
    public static void main(String[] args) {
        A b = new B(1);
        b.paint();
        b.draw();
    }
}
class A {
    public A() {
        System.out.println("생성자 of A");
    }
    public A(int i) {
        System.out.println("생성자 of AA" + i);
    }
    public void paint() {
        System.out.print("A");
        draw();
    }
    public void draw() {
        System.out.print("B");
        draw();
    }
}
class B extends A {
    public B() {
        super.paint();
    }
    public B(int i) {
        System.out.println("생성자 BB" + i);
    }
    public void paint() {
        System.out.print("C");
    }
    public void draw() {
        System.out.print("D");
    }
}
```

정답:
생성자 of A
생성자 BB1
CD

```
public class MainClass {
    public static void main(String[] args) {
        A b = new B(1);
        b.paint();
        b.draw();
    }
}
class A {
    public A() {
        System.out.println("생성자 of A");
    }
    public A(int i) {
        System.out.println("생성자 of AA" + i);
    }
    public void paint() {
        System.out.print("A");
        draw();
    }
    public void draw() {
        System.out.print("B");
        draw();
    }
}
class B extends A {
    public B() {
        super.paint();
    }
    public B(int i) {
        super(10);
        System.out.println("생성자 BB" + i);
    }
    public void paint() {
        System.out.print("C");
    }
    public void draw() {
        System.out.print("D");
    }
}
```

정답:
생성자 of AA10
생성자 BB1
CD

```
public class MainClass {
    public static void main(String[] args) {
        A b = new B(1);
        b.paint();
        b.draw();
    }
}
class A {
    public A() {
        System.out.println("생성자 of A");
    }
    public A(int i) {
        System.out.println("생성자 of AA" + i);
    }
    public void paint() {
        System.out.print("A");
        draw();
    }
    public void draw() {
        System.out.print("B");
        draw();
    }
}
class B extends A {
    public B() {
        super.paint();
    }
    public B(int i) {
        System.out.println("생성자 BB" + i);
        super(10);
    }
    public void paint() {
        System.out.print("C");
    }
    public void draw() {
        System.out.print("D");
    }
}
```

정답: 에러

error: call to super must be first statement in constructor

```
public class MainClass {
    public static void main(String[] args) {
        A b = new B(1);
        b.paint();
        b.draw();
        b.specialDraw(); // 여기는 어떻게 될까?
    }
}
class A {
    public A() {
        System.out.println("생성자 of A");
    }
    public A(int i) {
        System.out.println("생성자 of AA" + i);
    }
    public void paint() {
        System.out.print("A");
        draw();
    }
    public void draw() {
        System.out.print("B");
        draw();
    }
}
class B extends A {
    public B() {
        super.paint();
    }
    public B(int i) {
        super(10);
        System.out.println("생성자 BB" + i);
    }
    public void paint() {
        System.out.print("C");
    }
    public void draw() {
        System.out.print("D");
    }
    public void specialDraw() {
        System.out.print("D");
    }
}
```

정답: 에러

error: cannot find symbol