

CS 251

Intermediate Programming

Quiz 5

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Question 1 – abstract final

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It really makes no sense to create an abstract final class since abstract classes *must* be extended, and final classes *can't* be extended.

Question 2 – Anonymous Inner Class

An anonymous inner class is:

- A An object that has forgotten what class it was created from.
- B A class, such as `Object` that can represent any class.
- C A class both defined and instantiated in a single expression within a method.

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`protected` Only this class and its subclasses

`public` Accessible to all

Question 4 – Parent/InnerChild

```
public class Parent {
    public int x = 0;

    public Parent(int x) {
        this.x = x;
    }

    public class InnerChild extends Parent {
        public int x = 1;

        public InnerChild(int x) {
            super(2*x);
            this.x = x;
        }

        public void innerMethod(int x) {
            outerMethod(x);
            System.out.println(x);
            System.out.println(this.x);
            System.out.println(super.x);
            System.out.println(Parent.this.x);
        }
    }
}
```

Question 4 – Parent/InnerChild cont.

```
public void outerMethod(int x) {
    System.out.println(x);
    System.out.println(this.x);
}

public static void main(String[] args) {
    int x = 37;
    Parent p = new Parent(x);
    x = 6;
    Parent c1 = p.new InnerChild(x + 1);
    InnerChild c2 = p.new InnerChild(x - 1);

    p.outerMethod(2);
    c1.outerMethod(3);
    c2.innerMethod(4);
}
}
```

Question 4 – Parent/InnerChild result

2

37

3

14

4

10

4

5

10

37