

CPSC 233 Midterm review, fall 2005

Multiple choice questions: For each question make sure that you select the **best** answer to each question.

- 1) Which of the following statements are true of Java programs?
 - a) A class can implement more than one interface.
 - b) A class can extend more than one class.
 - c) Multiple inheritance is a built-in part of the Java language.
 - d) (b) & (c)
 - e) None of the above statements are true.

- 2) Which of the following statements are true about Java programs?
 - a. Overriding refers to methods with the same name & parameter list but have separate definitions in the parent and child class.
 - b. Overloading refers to methods that have the same name but are distinguished by their parameter lists.
 - c. Preceding an attribute with the word private in a class definition is an example of information hiding e.g., class Foo { private int num; }
 - d. One of the main differences between classes and interfaces is that classes have behavior whereas interfaces do not.
 - e. All of the above are true

Short answer questions:

1. What will be the output of the following program?

```

public class SA1
{
    public static void main (String [] args)
    {
        Foo f = new Foo ();
        System.out.println("1:" + f.getNum() + " " + f.getCh());

        f = new Foo(123);
        System.out.println("2:" + f.getNum() + " " + f.getCh());

        f = new Foo('$');
        f.setNum(13);
        System.out.println("3:" + f.getNum() + " " + f.getCh());

        f = new Foo(66, 'J');
        System.out.println("4:" + f.getNum() + " " + f.getCh());

        f = new Foo (10,20, 'T');
        System.out.println("5:" + f.getNum() + " " + f.getCh());
    }
}

public class Foo
{
    private int num;
    private char ch;
    private static int no = 888;

    public Foo ()
    {
        num = 1;
        ch = '*';
    }
    public Foo (int num)
    {
        this();
        no = no;
    }
    public Foo (char newCh)
    {
        this();
        ch = newCh;
    }
    public Foo (int num, char ch)
    {
        this();
        this.num = num;
        this.ch = ch;
    }
    public Foo (int n1, int n2, char c1)
    {
        this ();
        num = no;
        no = n1 + num;
        ch = '?';
    }
}

```

```
public int getNum ()
{
    return num;
}
public char getCh ()
{
    return ch;
}
public void setNum (int newNum)
{
    newNum = newNum;
}
public void setCh (char newCh)
{
    this.ch = newCh;
}
}
```

<< **Write your answer here** >>

<< **End of answer space** >>

2. For this question you are to modify the program below so that:

- The list contains ten elements.
- The data field, “num”, for each element is set to -1.
- The program steps through the list and displays the value data field onscreen, one item per line.

```
public class SA2
{
    public static void main (String [] args)
    {
        final int SIZE = 10;
        Foo [] array;
        int i;
        << Begin answer space >>
    }
}
```

<< End of answer space >>

```
    }  
}  
  
public class Foo  
{  
    private int num;  
    public Foo ()  
    {  
        num = 1;  
    }  
    public Foo (int newNum)  
    {  
        num = newNum;  
    }  
    public int getNum ()  
    {  
        return num;  
    }  
    public void setNum (int newNum)  
    {  
        num = newNum;  
    }  
}
```



JT: Liked the practice exam? Then you'll love the real thing!