

Creating Class Methods

01. A class method call

- (A) always requires that the class identifier precedes the method identifier.
- (B) may be called with the method identifier if in the same .java file .
- (C) is only possible after a new object is constructed.
- (D) uses the class identifier only for readability.

10. Which of the following Java keywords are used frequently in the declaration of a class method?

- (A) **void**
- (B) **public**
- (C) **static**
- (D) All of the above

11. Consider the Java program below.

```
public class Q11
{
    public static void main(String args[ ])
    {
        boohiss();           // line 1
        boohiss.Q11();       // line 2
        Q11.boohiss();       // line 3
    }

    public static void boohiss()
    {
        System.out.println("Calling boohiss");
    }
}
```

Which of the statements in the **main** method is a proper method call?

- (A) Line 1 only
- (B) Line 2 only
- (C) Line 3 only
- (D) Lines 1 and 3

100. Consider the Java program below.

```
public class Q12A
{
    public static void main(String args[ ])
    {
        boohiss();           // line 1
        Q12A.boohiss();     // line 2
        Q12B.boohiss();     // line 3
    }
}

class Q12B
{
    public static void boohiss()
    {
        System.out.println("Calling boohiss");
    }
}
```

Which of the statements in the **main** method is a proper method call?

- (A) Line 1 only
- (B) Line 3 only
- (C) Lines 1 and 2
- (D) Lines 1 and 3

101. What is the output of the following program?

```
public class Q13
{
    public static void main(String args [ ])
    {
        method1();
    }

    public static void method1()
    {
        method2();
        System.out.println("Calling method 1");
    }

    public static void method2()
    {
        method3();
        System.out.println("Calling method 2");
    }

    public static void method3()
    {
        System.out.println("Calling method 3");
    }
}
```

- (A) Calling method 1
Calling method 2
Calling method 3
- (B) Calling method 3
Calling method 2
Calling method 1
- (C) Calling method 1
Calling method 3
Calling method 2
- (D) Error message

110. What is the output of the following program?

```
public class Q14
{
    public static void main(String args [ ])
    {
        method1();
        method3();
        method2();
    }

    public static void method1()
    {
        System.out.println("Calling method 1");
    }

    public static void method2()
    {
        System.out.println("Calling method 3");
    }

    public static void method3()
    {
        System.out.println("Calling method 2");
    }
}
```

- (A) Calling method 1
Calling method 2
Calling method 3
- (B) Calling method 3
Calling method 2
Calling method 1
- (C) Calling method 1
Calling method 3
Calling method 2
- (D) Error message

111. What is the output of the following program?

```
public class Q15
{
    public static void main(String args [ ])
    {
        method1();
        method2();
        method3();
    }
}

class Tango
{
    public static void method1()
    {
        System.out.println("Calling method 1");
    }

    public static void method2()
    {
        System.out.println("Calling method 2");
    }

    public static void method3()
    {
        System.out.println("Calling method 3");
    }
}
```

- (A) Calling method 1
Calling method 2
Calling method 3
- (B) Calling method 3
Calling method 2
Calling method 1
- (C) Calling method 1
Calling method 3
Calling method 2
- (D) Error message

1000. What is the output of the following program?

```
public class Q16
{
    public static void main(String args [ ])
    {
        Tango.method1();
    }
}

class Tango
{

    public static void method1()
    {
        method2();
        System.out.println("Calling method 1");
    }

    public static void method2()
    {
        System.out.println("Calling method 2");
        Method3();
    }

    public static void method3()
    {
        System.out.println("Calling method 3");
    }
}
```

- (A) Calling method 1
Calling method 2
Calling method 3
- (B) Calling method 2
Calling method 3
Calling method 1
- (C) Calling method 1
Calling method 3
Calling method 2
- (D) Error message

1001. Which of the following statements is true about the use of parameters with Java methods?

- (A) Methods without parameters can compile, but will not execute correctly.
- (B) All method declarations require parameters.
- (C) Many methods use parameters.
- (D) The use of parameters is optional to increase program readability.

1010. Which of the following statements is true about a method declaration with multiple parameters?

- (A) All parameters must be the same data type.
- (B) All parameters must be different data types.
- (C) Parameter data types may be the same or they may be different.
- (D) The parameter declarations depend on the method call.

1011. Which of the following method headings uses proper parameter declarations?

- (A) **public static void guess(double rate, double hours, int deductions);**
- (B) **public static void guess(double rate, hours, int deductions);**
- (C) **public static void guess(rate, hours, deductions);**
- (D) **public static void guess(7.85, 42.5, 3);**

1100. Which of the following method calls might use arguments correctly? (arguments in call, parameters in definition)

- (A) **guess(double rate, double hours, int deductions);**
- (B) **guess(double rate, hours, int deductions);**
- (C) **guess(int rate, hours, deductions);**
- (D) **guess(7.85, 42.5, 3);**

1101. The arguments in the method call and the parameters in the method heading must be the same

- I. quantity.
 - II. sequence.
 - III. datatype.
-
- (A) I only
 - (B) II only
 - (C) I & II only
 - (D) II & III only
 - (E) I, II & III

1110. What is the output of the following program?

```
public class Q23
{
    public static void main(String args [ ])
    {
        Q23.method1(1);
        method2(2);
    }

    public static void method1(int n)
    {
        System.out.println("Calling method " + n);
    }

    public static void method2(int n)
    {
        System.out.println("Calling method " + n);
        method3(n);
    }

    public static void method3(int n)
    {
        System.out.println("Calling method " + n);
    }
}
```

- (A) Calling method 1
Calling method 2
Calling method 3
- (B) Calling method 3
Calling method 2
Calling method 1
- (C) Calling method 1
Calling method 2
Calling method 2
- (D) Error message

1111. What is the output of the following program?

```
public class Q24
{
    public static void main(String args [ ])
    {
        int n = 4;
        method1(n);
        method2(n + 2, 3);
        method3(n + n);
    }

    public static void method1(int x)
    {
        System.out.println("x = " + x);
    }

    public static void method2(int x, int y)
    {
        System.out.println("x + y = " + (x + y) );
    }

    public static void method3(int n)
    {
        int x = 4;
        System.out.println("x = " + n+x);
    }
}
```

- (A) 4
63
8
- (B) x = 4
x + y = 9
x = 12
- (C) x = 4
x + y = 9
x = 8 4
- (D) Error message

hex

0010. What distinguishes the declaration of a **mutator** method?

- (A) The **public** keyword in the method heading
- (B) The **static** keyword in the method heading
- (C) The **void** keyword in the method heading
- (D) The **main** keyword in the method heading

0011. What distinguishes the declaration of an **accessor** method?

- (A) The **return** keyword in the method body
- (B) The **static** keyword in the method heading
- (C) The data type declaration in the method heading (do not confuse with parameter data types)
- (D) Both A and C

0012. What distinguishes a call to a **mutator** method?

- (A) The method call is the only part of a complete program statement.
- (B) The method call provides a value, which is used in the program statement.
- (C) The method call includes the **void** keyword.
- (D) The method call includes the **return** keyword.

0013. What distinguishes a call to a **accessor** method?

- (A) The method call is the only part of a complete program statement.
- (B) The method call provides a value, which is used in the program statement.
- (C) The method call includes the **void** keyword.
- (D) The method call includes the **return** keyword.

0014. What distinguishes a class method definition?

- (A) The **public** keyword in the method heading
- (B) The **static** keyword in the method heading
- (C) The **void** keyword in the method heading
- (D) The **main** keyword in the method heading

0015. What is the output of the following program?

```
public class Q29
{
    public static void main(String args [ ])
    {
        int x = 25;
        int y = 10;
        Calc.add(x,y);
        Calc.sub(x,y);
        Calc.mul(x,y);
        Calc.div(x,y);
    }
}

class Calc
{
    public static void add(int p, int q)
    {
        int result = p + q;
        System.out.println(p + " + " + q + " = " + result);
    }
    public static void sub(int p, int q)
    {
        int result = p - q;
        System.out.println(p + " - " + q + " = " + result);
    }
    public static void mul(int p, int q)
    {
        int result = p * q;
        System.out.println(p + " * " + q + " = " + result);
    }
    public static void div(int p, int q)
    {
        int result = p / q;
        System.out.println(p + " / " + q + " = " + result);
    }
}
```

- (A) 25 + 10
25 - 10
25 * 10
25 / 10
- (B) 25 + 10 = 35
25 - 10 = 15
25 * 10 = 250
25 / 10 = 2
- (C) 35
15
250
2
- (D) Error message

0016. What is the output of the following program?

```
public class Q30
{
    public static void main(String args [ ])
    {
        int x = 25;
        int y = 10;
        System.out.println(Calc.add(x,y));
        System.out.println(Calc.sub(x,y));
        System.out.println(Calc.mul(x,y));
        System.out.println(Calc.div(x,y));
    }
}

class Calc
{
    public static void add(int p, int q)
    {
        int result = p + q;
        System.out.println(p + " + " + q + " = " + result);
    }
    public static void sub(int p, int q)
    {
        int result = p - q;
        System.out.println(p + " - " + q + " = " + result);
    }
    public static void mul(int p, int q)
    {
        int result = p * q;
        System.out.println(p + " * " + q + " = " + result);
    }
    public static void div(int p, int q)
    {
        int result = p / q;
        System.out.println(p + " / " + q + " = " + result);
    }
}
```

- | | | |
|-------------|------------------|--------|
| (A) 25 + 10 | (B) 25 + 10 = 35 | (C) 35 |
| 25 - 10 | 25 - 10 = 15 | 15 |
| 25 * 10 | 25 * 10 = 250 | 250 |
| 25 / 10 | 25 / 10 = 2 | 2 |
- (D) Error message

0017. What is the output of the following program?

```
public class Q31
{
    public static void main(String args [ ])
    {
        int x = 25;
        int y = 10;
        System.out.println(x + " + " + y + " = " + Calc.add(x,y));
        System.out.println(x + " - " + y + " = " + Calc.sub(x,y));
        System.out.println(x + " * " + y + " = " + Calc.mul(x,y));
        System.out.println(x + " / " + y + " = " + Calc.div(x,y));
    }
}
```

```
class Calc
{
    public static int add(int p, int q)
    {
        int result = p + q;
        return result;
    }
    public static int sub(int p, int q)
    {
        int result = p - q;
        return result;
    }
    public static int mul(int p, int q)
    {
        return p * q;
    }
    public static int div(int p, int q)
    {
        return p / q;
    }
}
```

- (A) 25 + 10
25 - 10
25 * 10
25 / 10
- (B) 25 + 10 = 35
25 - 10 = 15
25 * 10 = 250
25 / 10 = 2
- (C) 35
15
250
2
- (D) Error message

0018. What is the output of the following program?

```
public class Q32
{
    public static void main(String args [ ])
    {
        int x = 25;
        int y = 10;
        Calc.add(x,y);
        Calc.sub(x,y);
        Calc.mul(x,y);
        Calc.div(x,y);
    }
}
```

```
class Calc
{
    public static int add(int p, int q)
    {
        int result = p + q;
        return result;
    }
    public static int sub(int p, int q)
    {
        int result = p - q;
        return result;
    }
    public static int mul(int p, int q)
    {
        return p * q;
    }
    public static int div(int p, int q)
    {
        return p / q;
    }
}
```

- | | | | | | |
|-----|---------|-----|---------------|-----|-----|
| (A) | 25 + 10 | (B) | 25 + 10 = 35 | (C) | 35 |
| | 25 - 10 | | 25 - 10 = 15 | | 15 |
| | 25 * 10 | | 25 * 10 = 250 | | 250 |
| | 25 / 10 | | 25 / 10 = 2 | | 2 |
- (D) No output

0019. What is the output of the following program?

```
public class Q33
{
    public static void main(String args [ ])
    {
        int x = 25;
        int y = 10;
        Calc.add(x,y);
        Calc.sub(x,y);
        Calc.mul(x,y);
        Calc.div(x,y);
    }
}

class Calc
{
    public static void add(int p, int q)
    {
        int result = p - q;
        System.out.println(p + " - " + q + " = " + result);
    }
    public static void sub(int p, int q)
    {
        int result = p + q;
        System.out.println(p + " + " + q + " = " + result);
    }
    public static void mul(int p, int q)
    {
        int result = p / q;
        System.out.println(p + " / " + q + " = " + result);
    }
    public static void div(int p, int q)
    {
        int result = p * q;
        System.out.println(p + " * " + q + " = " + result);
    }
}
```

- | | | | | | | | |
|-----|---------------|-----|---------------|-----|---------------|-----|---|
| (A) | 25 + 10 = 35 | (B) | 25 + 10 = 15 | (C) | 25 - 10 = 15 | (D) | 1 |
| | 25 - 10 = 15 | | 25 - 10 = 35 | | 25 + 10 = 35 | | 2 |
| | 25 * 10 = 250 | | 25 * 10 = 2 | | 25 / 10 = 2 | | 3 |
| | 25 / 10 = 2 | | 25 / 10 = 250 | | 25 * 10 = 250 | | 4 |
- (E) Error message

001A. What is the output of the following program?

```
public class Q34
{
    public static void main(String args [ ])
    {
        int x = 25;
        int y = 10;
        System.out.println(x + " + " + y + " = " + Calc.add(x,y));
        System.out.println(x + " - " + y + " = " + Calc.sub(x,y));
        System.out.println(x + " * " + y + " = " + Calc.mul(x,y));
        System.out.println(x + " / " + y + " = " + Calc.div(x,y));
    }
}

class Calc
{
    public static int add(int p, int q)
    {
        int result = p - q;
        return result;
    }
    public static int sub(int p, int q)
    {
        int result = p + q;
        return result;
    }
    public static int mul(int p, int q)
    {
        return p / q;
    }
    public static int div(int p, int q)
    {
        return p * q;
    }
}
```

- | | | | | | | | |
|-----|---------------|-----|---------------|-----|---------------|-----|---|
| (A) | 25 + 10 = 35 | (B) | 25 + 10 = 15 | (C) | 25 - 10 = 15 | (D) | 1 |
| | 25 - 10 = 15 | | 25 - 10 = 35 | | 25 + 10 = 35 | | 2 |
| | 25 * 10 = 250 | | 25 * 10 = 2 | | 25 / 10 = 2 | | 3 |
| | 25 / 10 = 2 | | 25 / 10 = 250 | | 25 * 10 = 250 | | 4 |
- (E) Error message

001B. What is the output of the following program?

```
public class Q35
{
    public static void main(String args [ ])
    {
        int x = 25;
        int y = 10;
        System.out.println(Calc.add(x,y));
        System.out.println(Calc.sub(x,y));
        System.out.println(Calc.mul(x,y));
        System.out.println(Calc.div(x,y));
    }
}

class Calc
{
    public static String add(int p, int q)
    {
        int sum = p + q;
        String result = p + " + " + q + " = " + sum;
        return result;
    }
    public static String sub(int p, int q)
    {
        int diff = p - q;
        String result = p + " - " + q + " = " + diff;
        return result;
    }
    public static String mul(int p, int q)
    {
        int prod = p * q;
        String result = p + " * " + q + " = " + prod;
        return result;
    }
    public static String div(int p, int q)
    {
        int quot = p / q;
        String result = p + " / " + q + " = " + quot;
        return result;
    }
}
```

- | | | | | | | | |
|-----|---------------|-----|---------------|-----|---------------|-----|---|
| (A) | 25 + 10 = 35 | (B) | 25 + 10 = 15 | (C) | 25 - 10 = 15 | (D) | 1 |
| | 25 - 10 = 15 | | 25 - 10 = 35 | | 25 + 10 = 35 | | 2 |
| | 25 * 10 = 250 | | 25 * 10 = 2 | | 25 / 10 = 2 | | 3 |
| | 25 / 10 = 2 | | 25 / 10 = 250 | | 25 * 10 = 250 | | 4 |
- (E) Error message

001C. What is the output of the following program?

```
public class Q36
{
    public static void main(String args [ ])
    {
        int x = 25;
        int y = 10;
        System.out.println(Calc.add(x,y));
        System.out.println(Calc.sub(x,y));
        System.out.println(Calc.mul(x,y));
        System.out.println(Calc.div(x,y));
    }
}

class Calc
{
    public static String add(int p, int q)
    {
        int sum = p + q;
        String result = p + " + " + q + " = " + sum;
        return "1";
    }
    public static String sub(int p, int q)
    {
        int diff = p - q;
        String result = p + " - " + q + " = " + diff;
        return "2";
    }
    public static String mul(int p, int q)
    {
        int prod = p * q;
        String result = p + " * " + q + " = " + prod;
        return "3";
    }
    public static String div(int p, int q)
    {
        int quot = p + q;
        String result = p + " / " + q + " = " + quot;
        return "4";
    }
}
```

- | | | | | | | | |
|-----|---------------|-----|---------------|-----|---------------|-----|---|
| (A) | 25 + 10 = 35 | (B) | 25 + 10 = 15 | (C) | 25 - 10 = 15 | (D) | 1 |
| | 25 - 10 = 15 | | 25 - 10 = 35 | | 25 + 10 = 35 | | 2 |
| | 25 * 10 = 250 | | 25 * 10 = 2 | | 25 / 10 = 2 | | 3 |
| | 25 / 10 = 2 | | 25 / 10 = 250 | | 25 * 10 = 250 | | 4 |
- (E) Error message

001D. The Java compiler checks for

- (A) correct program syntax.
- (B) correct program logic.
- (C) consistent program statement indentations.
- (D) the use of meaningful variable identifiers.
- (E) the proper implementation of methods.

001E. Which of the following are fundamental program design considerations?

- (A) Programs should use mnemonic identifiers.
- (B) Control structures should use a consistent indentation style.
- (C) Specific tasks should be placed in procedures or functions, called methods.
- (D) The main method should be used for program sequence, not large numbers of program statements.
- (E) All of the above

001F. Which of the following variable names is **not** a mnemonic identifier?

- (A) netPay
- (B) deductions
- (C) k
- (D) checkingBalance
- (E) grossPay

0020. Which of the following **boohiss** methods will receive an integer and return triple that amount?

- (A) `public static int boohiss() { return j + j + j; }`
- (B) `public static void boohiss(int j) { return j + j + j; }`
- (C) `public static int boohiss(char j) { return 3 * j; }`
- (D) `public static int boohiss(int j) { return 3 * j; }`

0021. Which of the following **boohiss** methods will receive 1 character and return its ASCII value?

- (A) `public static int boohiss(char c) { return (int) c; }`
 - (B) `public static char boohiss(int c) { return (int) c; }`
 - (C) `public static char boohiss(char c) { return (int) c; }`
 - (D) `public static char boohiss(int c) { return (char) c; }`
 - (E) `public static int boohiss(char c) { return (char) c; }`
-

0022. Which of the following *boohiss* methods will receive 1 integer and return the next one?

- (A) `public static char boohiss(char c) { c++; return c; }`
 - (B) `public static char boohiss(char c) { return c++; }`
 - (C) `public static int boohiss(int c) { c++; return c; }`
 - (D) `public static int boohiss(int c) { return c++; }`
-

0023. Which of the following *boohiss* methods will receive 1 character and return the next one?

- (A) `public static char boohiss(char c) { c++; return c; }`
 - (B) `public static char boohiss(char c) { return c++; }`
 - (C) `public static int boohiss(int c) { c++; return c; }`
 - (D) `public static int boohiss(int c) { return c++; }`
-

0024. What is the output of the following program?

```
public class Q59
{
    public static void main(String args [ ])
    {
        method(3);
        method(2);
        method(1);
    }

    public static void method(int n)
    {
        System.out.println("Calling method " + n);
    }
}
```

- (A) Calling method 1
Calling method 2
Calling method 3
- (B) Calling method 3
Calling method 2
Calling method 1
- (C) Calling method 1
Calling method 3
Calling method 2
- (D) Error Message