Code Magnets

A working Java program is all scrambled up on the fridge. Can you rearrange the code snippets to make a working Java program that produces the output listed below? Some of the curly braces fell on the floor and they were too small to pick up, so feel free to add as many of those as you need!

```java
if (x == 1) {
    System.out.print("d");
    x = x - 1;
}
```

```java
if (x == 2) {
    System.out.print("b c");
}
```

```java
class Shuffle1 {
    public static void main(String [] args) {
```

```java
if (x > 2) {
    System.out.print("a");
}
```

```java
int x = 3;
```

```java
x = x - 1;
System.out.print("-");
```

```java
while (x > 0) {
```

Output:

```
File Edit Window Help Sleep
% java Shuffle1
a-b c-d
```

BE the compiler

Each of the Java files on this page represents a complete source file. Your job is to play compiler and determine whether each of these files will compile. If they won't compile, how would you fix them?

A

```java
class Exercise1b {
  public static void main(String [] args) {
    int x = 1;
    while ( x < 10 ) {
      if ( x > 3) {
        System.out.println("big x");
      }
    }
  }
}
```

B

```java
public static void main(String [] args) {
    int x = 5;
    while ( x > 1 ) {
      x = x - 1;
      if ( x < 3) {
        System.out.println("small x");
      }
    }
}
```

C

```java
class Exercise1b {
    int x = 5;
    while ( x > 1 ) {
      x = x - 1;
      if ( x < 3) {
        System.out.println("small x");
      }
    }
}
```

JavaCross 7.0

Let's give your right brain something to do.

It's your standard crossword, but almost all of the solution words are from chapter 1. Just to keep you awake, we also threw in a few (non-Java) words from the high-tech world.

Across

4. Command-line invoker
6. Back again?
8. Can't go both ways
9. Acronym for your laptop's power
12. number variable type
13. Acronym for a chip
14. Say something
18. Quite a crew of characters
19. Announce a new class or method
21. What's a prompt good for?
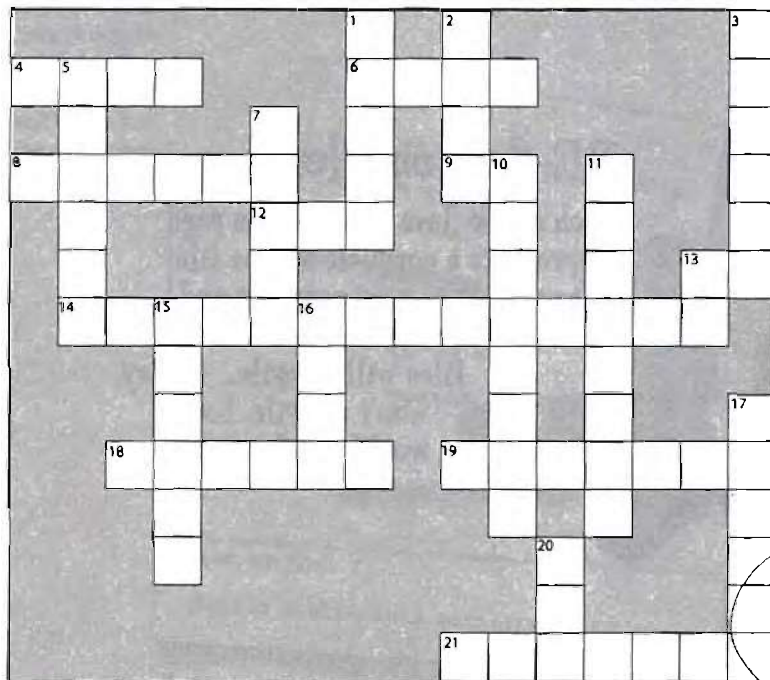
Down

1. Not an integer (or _____ your boat)
2. Come back empty-handed
3. Open house
5. Things' holders
7. Until attitudes improve
10. Source code consumer
11. Can't pin it down
13. Dept. of LAN Jockeys
15. Shocking modifier
16. Just gotta have one
17. How to get things done
20. Bytecode consumer

Mixed Messages

A short Java program is listed below. One block of the program is missing. Your challenge is to **match the candidate block of code** (on the left), **with the output** that you'd see if the block were inserted. Not all the lines of output will be used, and some of the lines of output might be used more than once. Draw lines connecting the candidate blocks of code with their matching command-line output. (The answers are at the end of the chapter).

```java
class Test {
    public static void main(String [] args) {
        int x = 0;
        int y = 0;
        while ( x < 5 ) {



        System.out.print(x + "" + y +" ");
        x = x + 1;
        }
    }
}
```

Candidate code goes here

Candidates:

match each candidate with one of the possible outputs

```java
y = x - y;
```

```java
y = y + x;
```

```java
y = y + 2;
if( y > 4 ) {
    y = y - 1;
}
```

```java
x = x + 1;
y = y + x;
```

```java
if ( y < 5 ) {
    x = x + 1;
    if ( y < 3 ) {
        x = x - 1;
    }
}
y = y + 2;
```

Possible output:

```
22 46
```

```
11 34 59
```

```
02 14 26 38
```

```
02 14 36 48
```

```
00 11 21 32 42
```

```
11 21 32 42 53
```

```
00 11 23 36 410
```

```
02 14 25 36 47
```

Pool Puzzle

Your **job** is to take code snippets from the pool and place them into the blank lines in the code. You may **not** use the same snippet more than once, and you won't need to use all the snippets. Your **goal** is to make a class that will compile and run and produce the output listed. Don't be fooled—this one's harder than it looks.

Output

```
File  Edit  Window  Help  Cheat
%java PoolPuzzleOne
a noise
annoys
an oyster
```

```java
class PoolPuzzleOne {
  public static void main(String [] args) {
    int x = 0;

    while ( _____ ) {

      _____

      if ( x < 1 ) {

      }

      if ( _____ ) {

      }
      if ( x == 1 ) {

      }
      if ( _____ ) {

      }
      System.out.println("");

      _____
    }
  }
}
```

Note: Each snippet from the pool can be used only once!

```
x > 0
x < 1
x > 1
x > 3
x < 4
```

```
System.out.print(" ");
System.out.print("a ");
System.out.print("n ");
System.out.print("an ");
```

```
x = x + 1;
x = x + 2;
x = x - 2;
x = x - 1;
```

```
System.out.print("noys ");
System.out.print("oise ");
System.out.print(" oyster ");
System.out.print("annoys");
System.out.print("noise");
```