```
7. class J0100 {
8. public static void main(String args[]) {
System.out.println(args.length);
10. System.out.println(args[0]); // abc
11. }
12. }
15. class J0101 {
16. public static void main(String args[]) {
18. boolean b = true;
19. System.out.println("boolean = "+b);
21. char y;
22. y = 'a';
23. System.out.println("character = "+y);
25. byte c;
26. c = 127;
27. System.out.println("byte = "+c);
29. short a;
30. a = 32767;
31. System.out.println("Short = "+a);
33. int x;
34. x = 2147483647;
35. System.out.println("Integer = "+x);
37. long b;
38. b = 9223372036854775807L;
39. System.out.println("long = "+b);
40. }
41. }
46. class J0102 {
47. public static void main(String args[]) {
```

```
49. float d;
51. System.out.println("float = "+d);
53. double e;
55. System.out.println("double = "+e);
61. String z ="ThaiAll";
62. System.out.println("string = "+z);
63. System.out.println(z.substring(0,4)); // Thai
64. System.out.println(z.substring(2,5)); // aiA
65. System.out.println(z.substring(4)); // All
66. System.out.println(z.toUpperCase()); // THAIALL
67. System.out.println(z.toLowerCase()); // thaiall
68. char ar[] = new char[128];
69. ar = z.toCharArray();
70. System.out.println((char)ar[0]);
                                  // T
71. System.out.println(ar[0]);
                                // T
72. System.out.println(ar[2] + ar[4]); // 162 (97 + 65)
73. z = "1234.1";
74. int m = Integer.parseInt(z.substring(0,3)) + 5; // 123 + 5
75. double n = Double.parseDouble(z) + 0.2;
                                            // 1234.3
76. System.out.println(m + n);
                              // 128 + 1234.3 = 1362.3
77. System.out.println(Integer.toString(m) + 5); // 1285
78. }
79. }
84. class J0201 {
85. public static void main(String args[]) {
86. int x;
87. x = 6;
```

```
88. if (x > 5) System.out.println("more than 5:" + x);
89. if (x > 5 \&\& x < 10) System.out.println("five to ten");
90. if (x > 5 \mid | x < 10) System.out.println("all numbers");
91. if (x > 10) {
92. System.out.print("more than 10:");
93. System.out.println(x);
94. }
95. }
96. }
101.
            import java.lang.*;
102.
            class J0202 {
103.
            public static void main(String args[]) {
104.
            int x;
105.
            x = 6;
106.
            if (x > 5) System.out.println("more than 5");
107.
            else System.out.println("less than or equal 5");
108.
            if (x > 10) System.out.println("more than 10");
109.
            else { System.out.println("less than or equal 10"); }
110.
            Comparable a[] = new Comparable[5];
            a[0] = new Integer(3);
111.
112.
            a[1] = new Integer(10);
            a[2] = "abc";
113.
            System.out.println(a[0] + " " + a[1] + " " + a[2]);
114.
115.
            if (a[2].equals("abc")) { System.out.println("equal"); }
116.
            if (a[0].compareTo(a[1]) < 0) System.out.print(a[0]); // 3
            if (a[1].compareTo(a[0]) > 0) System.out.print(a[0]+""+a[1]); // 310
117.
            if (a[0].compareTo(a[0]) == 0) System.out.print("equal"); // equal
118.
119.
            System.out.print(a[0].compareTo(a[1])); // -1
120.
            }
```

```
121.
            // :::: โปรแกรมลำดับที่ 6
122.
125.
            import java.util.Date;
126.
            class J0203 {
127.
            public static void main(String args[]) {
128.
            byte a = (byte) (new Date().getTime() % 5);
129.
            switch (a) {
130.
            case 1:
            System.out.println("one"); break;
131.
132.
            case 2:
            System.out.println("two"); break;
133.
134.
            default:
            System.out.println("not found" + a);
135.
136.
            break;
            }
137.
138.
            }
            }
139.
            class J0204 {
144.
145.
            public static void main(String args[]) {
            System.out.println("ASCII character :: ");
146.
147.
            for (int i=0; i<256; i++) {
            System.out.print((char)i + " ");
148.
149.
            // System.out.println(i); 0 - 255
150.
            }
            String s = "thaiall";
151.
            System.out.println(s + s.length());
152.
153.
            }
154.
            }
```

```
159.
            class J0205 {
160.
            public static void main(String args[]) {
161.
            System.out.println("print 1 to 10 :: ");
162.
            int i;
            i = -5;
163.
164.
            while (i <= 5) {
165.
            try {
166.
            i++;
167.
            System.out.println((double)5/i); //Infinity
168.
            System.out.println(5/i); //catch ok
169.
            }
170.
            catch (ArithmeticException e) {
171.
            System.out.println("may divide by zero");
172.
            }
173.
            }
174.
            int k = 0;
175.
            i = 0;
176.
            while (i < 5) {
177.
            System.out.print(++k);
178.
            k = k + (i++);
179.
            System.out.print(k--);
180.
            }// 11122447711
181.
            }
182.
187.
            class J0206 {
188.
            public static void main(String args[]) {
189.
            System.out.println("print 1 to 10 :: ");
190.
            int i;
191.
            i = 1;
```

```
192.
            try {
193.
            do {
194.
            System.out.println(i);
195.
            i++;
196.
            } while (i <= 10);
197.
            }
198.
            catch (ArrayIndexOutOfBoundsException e) {
199.
            System.out.println("over index of array");
200.
            }
201.
            }
202.
            }
206.
            import java.io.*;
207.
            class J0301 {
208.
            public static void main(String args[]) throws IOException {
209.
            char buf;
210.
            buf = (char)System.in.read();
211.
            System.out.println("Output is "+buf);
212.
            }
213.
            }
217.
            import java.io.*;
218.
            class J0302 {
219.
            public static void main(String args[]) throws IOException {
220.
            char buf1,buf2;
221.
            buf1 = (char)System.in.read();
222.
            buf2 = (char)System.in.read();
223.
            System.out.println("Output is "+buf1+buf2);
224.
            }
225.
229.
            import java.io.*;
```

```
230.
            class J0303 {
231.
            public static void main(String args[]) throws IOException {
232.
            System.out.println("Get until receive 0 [hidden is 13, 10]");
233.
            char buf;
234.
            do {
235.
            buf = (char)System.in.read();
236.
            System.out.println("Output is "+buf);
237.
            } while (buf != '0');
238.
            }
239.
            }
243.
            import java.io.*;
244.
            class J0304 {
245.
            public static void main(String args[]) throws IOException {
246.
            BufferedReader stdin = new BufferedReader(new InputStreamReader(System.in));
247.
            String buf;
248.
            int i1,i2,i3;
249.
            buf = stdin.readLine();
250.
            i1 = Integer.parseInt(buf);
251.
            buf = stdin.readLine();
252.
            i2 = Integer.parseInt(buf);
253.
            i3 = i1 + i2;
            System.out.println("Output is "+i1+" + "+i2+" = "+i3);
254.
255.
            }
256.
            }
260.
            import java.io.*;
261.
            class J0305 {
262.
            public static void main(String args[]) throws IOException {
263.
            BufferedReader stdin = new BufferedReader(new InputStreamReader(System.in));
```

```
264.
            String buf;
265.
            int i;
266.
            System.out.println("Get until receive 0");
267.
            do {
268.
            buf = stdin.readLine();
269.
            i = Integer.parseInt(buf);
270.
            System.out.println("Output is "+i);
271.
            } while (i != 0);
272.
            }
273.
            }
277.
            class J0401 {
278.
            public static void main(String args[]) {
279.
            sub1(); sub2(); sub1();
280.
            }
281.
            static void sub1() {
282.
            System.out.print("x");
283.
            }
284.
            static void sub2() { System.out.print("y"); }
285.
            }
289.
            class J0402 {
            public static void main(String args[]) {
290.
291.
            int s = 0;
292.
            s = sub(2,8,s);
293.
            s = sub(7,3,s);
294.
            s = sub(4,6,s);
295.
            System.out.println("Sum = "+s);
296.
297.
            public static int sub(int x, int y, int z) {
298.
            int a = y + x + z;
```

```
299.
            return (a + y + x + z);
300.
            }
301.
            }
            class J0403 {
305.
306.
            public static void main(String args[]) {
307.
            int j = 3;
308.
            System.out.println(doubleofnumber(j));
309.
            }
310.
            static int doubleofnumber(int i) {
311.
            i = i * 2;
312.
            return (i);
313.
            }
314.
            }
319.
            class sub01 {
320.
            void subx() {
321.
            System.out.println("subx in sub01");
322.
            }
323.
            }
324.
            class sub02 {
325.
            void subx() {
            System.out.println("subx in sub02");
326.
327.
            }
328.
            class J0404 extends sub02 {
329.
330.
            j0404() {
331.
            super.subx(); // subx in sub02
332.
            this.subx(); // subx in main
333.
            }
334.
            public static void main(String args[]) {
```

```
335.
            sub01 x = new sub01();
336.
            System.out.println("main"); // main
337.
            x.subx(); // subx in sub01
338.
            j0404 y = new j0404();
339.
            }
340.
            void subx() {
341.
            System.out.println("subx in main");
342.
            }
343.
            }
346.
            class J0501 {
347.
            public static void main(String args[]) {
348.
            int x[] = \{4,18,12\};
349.
            System.out.println("Amount of array = " + x.length);
            for (int i = 0; i < x.length; i++) {
350.
351.
            System.out.println("element "+i+" = "+x[i]);
352.
353.
            }
354.
            }
358.
            class J0502 {
359.
            public static void main(String args[]) {
360.
            String a[][] = new String[2][3];
361.
            a[0][0] = "101";
362.
            a[0][1] = "102";
363.
            a[0][2] = "103";
364.
            int i = 0;
365.
            a[1][i++] = "tom"; // 1,0
            a[1][i++] = "dang"; // 1,1
366.
367.
            a[1][i++] = "boy"; // 1,2
368.
            for (i = 0; i < a[0].length; i++) {
```

```
System.out.println("element of 0,"+i+" = "+a[0][i]);
369.
370.
            for (i = 0; i < a[1].length; i++) {
371.
            System.out.println("element of 1,"+i+" = "+a[1][i]);
372.
373.
            }
374.
            }
375.
            }
380.
            import java.io.*;
381.
            class J0601 {
382.
            public static void main (String args[]) throws IOException {
383.
            File f = new File("j0601.java");
384.
            System.out.println("getName: "+f.getName());
385.
            System.out.println("getPath: "+f.getPath());
            System.out.println("getAbsolutePath: "+f.getAbsolutePath());
386.
387.
            System.out.println("exists: "+f.exists());
388.
            System.out.println("isFile: "+f.isFile());
389.
            System.out.println("isDirectory: "+f.isDirectory());
390.
            System.out.println("canWrite: "+f.canWrite());
391.
            System.out.println("canRead: "+f.canRead());
392.
            System.out.println("length: "+f.length());
393.
            File file = new File("hello.txt");
394.
            boolean success = file.createNewFile();
395.
            File file2 = new File("hello.java");
396.
            success = file.renameTo(file2);
397.
            File b = new File("c:/");
            success = file2.renameTo(new File(b, file2.getName()));
398.
            success = (new File("hello.java")).delete();
399.
400.
            System.out.println(success); // false
401.
            }
```

```
402.
            }
406.
            import java.io.*;
407.
            class J0602 {
408.
            public static void main (String args[]) {
            File d = new File(args[0]);
409.
410.
            String n[] = d.list();
411.
            for (int i = 0; i < n.length; i++) {
412.
            File f = new File(args[0] + '/' + n[i]);
413.
            System.out.println(i+": "+n[i]+" Size="+f.length());
414.
            }
415.
            System.out.println("directory: "+d.getPath());
416.
            }
417.
            }
420.
            import java.io.*;
421.
            class J0603 {
422.
            public static void main (String args[]) throws IOException {
423.
            int n = 0;
424.
            byte b[] = new byte[128];
425.
            FileInputStream fin = new FileInputStream("j0603.java");
426.
            while ((n = fin.read(b)) != -1) {
427.
            for(int i=0;i<n;i++) System.out.print((char)b[i]);</pre>
428.
            }
429.
            System.out.println(n = fin.read(b)); // -1
430.
            fin.close();
431.
            }
            }
432.
436.
            import java.io.*;
437.
            class J0604 {
438.
            public static void main (String args[]) throws IOException {
```

```
439.
            FileOutputStream fout = new FileOutputStream("tmp.txt");
440.
            for(int i=0;i<256;i++) {
441.
            fout.write(i);
442.
            }
            fout.close();
443.
444.
            }
445.
            }
448.
            import java.io.*;
449.
            class J0605 {
450.
            public static void main (String args[]) throws IOException {
451.
            FileOutputStream fout = new FileOutputStream("tmp.txt");
452.
            for(int i=1;i<=10;i++) {
453.
            fout.write(i+47);
454.
            fout.write(13);
455.
            fout.write(10);
456.
457.
            fout.close();
458.
            }
459.
            }
464.
            import java.io.*;
465.
            class J0606 {
466.
            public static void main (String args[]) throws IOException {
467.
            int i = 0, n = 0;
468.
            char b[] = new char[1];
469.
            FileReader fin = new FileReader("tmp.txt");
470.
            while ((n = fin.read(b)) != -1) {
471.
            System.out.println(i+": "+b[0]);
472.
            i = i + 1;
473.
            }
```

```
474.
            fin.close();
475.
            }
476.
            }
481.
            import java.io.*;
            class J0607 {
482.
483.
            public static void main (String args[]) throws IOException {
484.
            int i = 1, n = 0;
485.
            char b[] = new char[16];
486.
            FileReader fin = new FileReader("tmp.txt");
487.
            while ((n = fin.read(b)) != -1) {
            System.out.print((i-1)*16 + " - " + (i*16-1) + ":");
488.
489.
            System.out.print(b[0]+b[1]+b[2]+b[3]+b[4]+b[5]+b[6]+b[7]+b[8]);
490.
            System.out.println(b[9]+b[10]+b[11]+b[12]+b[13]+b[14]+b[15]);
491.
            i = i + 1;
492.
            }
493.
            fin.close();
494.
            }
495.
            }
499.
            import java.io.*;
500.
            class J0608 {
501.
            public static void main (String args[]) throws IOException {
502.
            int i = 1;
503.
            String b;
504.
            FileReader fin = new FileReader("data.txt");
505.
            BufferedReader bin = new BufferedReader (fin);
506.
            // System.out.println(b = bin.readLine()); // output is b
507.
            while ((b = bin.readLine()) != null) {
            System.out.println(i + " : " +b);
508.
509.
            i = i + 1;
```

```
510.
            }
511.
            System.out.println(b = bin.readLine()); // null
512.
            fin.close();
513.
            }
            }
514.
520.
            import java.io.*;
521.
            class J0701 {
522.
            public static void main (String args[]) throws IOException {
523.
            int i = 1;
524.
            int tot = 0;
525.
            String b;
526.
            String[] fields;
527.
            String patternStr = ",";
528.
            FileReader fin = new FileReader("data.txt");
529.
            BufferedReader bin = new BufferedReader (fin);
530.
            while ((b = bin.readLine()) != null) {
531.
            fields = b.split(patternStr);
532.
            System.out.println(i + " : " + fields[0]);
533.
            System.out.println("Name : " + fields[1]);
534.
            System.out.println("Salary: " + fields[2]);
535.
            System.out.println("Status: " + fields[3]);
536.
            tot = tot + Integer.parseInt(fields[2]);
537.
            i = i + 1;
538.
            }
            System.out.println("Total : " + tot);
539.
540.
            fin.close();
541.
            }
542.
548.
            import java.io.*;
```

```
549.
           import java.lang.*;
550.
           class J0702 {
551.
           public static void main (String args[]) throws IOException {
552.
           int i = 1;
553.
           String b;
554.
           String[] fields;
555.
           String patternStr = ",";
556.
           FileReader fin = new FileReader("data.txt");
557.
           BufferedReader bin = new BufferedReader (fin);
558.
           FileOutputStream fout = new FileOutputStream("data.htm");
559.
           BufferedOutputStream bout = new BufferedOutputStream(fout);
560.
           PrintStream pout = new PrintStream(bout);
561.
           pout.println("<body bgcolor=yellow>");
562.
           while ((b = bin.readLine()) != null) {
563.
           fields = b.split(patternStr);
           pout.println("");
564.
565.
           pout.println(""+i+"");
566.
           pout.println(""+"ID = " + fields[0]+"");
567.
           pout.println(""+"Name = " + fields[1]+"");
568.
           pout.println(""+"Salary = " + fields[2]+"");
569.
           pout.println(""+"Status = " + fields[3]+"");
570.
           pout.println("");
571.
           i = i + 1;
572.
           }
573.
           pout.println("</body>");
574.
           fin.close();
575.
           pout.close();
576.
           }
577.
           }
```

```
581.
            import java.io.*;
582.
            class J0703 {
583.
            public static void main (String args[]) throws IOException {
584.
            int i = 0,d;
585.
            String b;
586.
            String[] fields;
587.
            String[] recs = {"","",""};
            String patternStr = ",";
588.
590.
            FileReader fin = new FileReader("data.txt");
591.
            BufferedReader bin = new BufferedReader (fin);
593.
            while ((b = bin.readLine()) != null) {
594.
            recs[i] = b;
595.
            i = i + 1;
596.
            }
597.
            fin.close();
599.
            FileOutputStream fout = new FileOutputStream("data.htm");
600.
            BufferedOutputStream bout = new BufferedOutputStream(fout);
601.
            PrintStream pout = new PrintStream(bout);
602.
            for(int j=0;j<i;j++) {
603.
            fields = recs[i].split(patternStr);
            pout.print(fields[0]+","+fields[1]+",");
604.
            d = Integer.valueOf(fields[2]).intValue() + 100;
606.
607.
            pout.print(d);
608.
            pout.println(","+fields[3]);
609.
            }
610.
            pout.close();
611.
            }
612.
617.
            import java.io.*;
```

```
618.
            class J0801 {
619.
            public static void main (String args[]) throws IOException {
620.
            int found=0;
621.
            char buf;
            String b,g = "";
622.
623.
            String[] fields;
624.
            String patternStr = ",";
625.
            System.out.println("Wait id and end character with [x]");
626.
            buf = (char)System.in.read();
627.
            while (buf != 'x') {
628.
            g = g + buf;
629.
            buf = (char)System.in.read();
630.
            }
631.
            FileReader fin = new FileReader("data.txt");
632.
            BufferedReader bin = new BufferedReader (fin);
633.
            while ((b = bin.readLine()) != null) {
634.
            fields = b.split(patternStr);
635.
            if (fields[0].equals(g)) {
636.
            System.out.println(fields[1]);
637.
            found = 1;
638.
            }
639.
            if (found == 0) System.out.println("Not found");
640.
641.
            fin.close();
642.
            }
643.
            }
647.
            import java.io.*;
648.
            class J0802 {
649.
            public static void main (String args[]) throws IOException {
```

```
650.
            int found=0;
651.
            String b,g = "";
652.
            String[] fields;
653.
            System.out.println("Wait string and enter");
            BufferedReader stdin = new BufferedReader(new InputStreamReader(System.in));
654.
655.
            g = stdin.readLine();
656.
            String patternStr = g;
657.
            FileReader fin = new FileReader("data.txt");
658.
            BufferedReader bin = new BufferedReader (fin);
659.
            while ((b = bin.readLine()) != null) {
660.
            fields = b.split(patternStr);
661.
            if (fields.length > 1) {
662.
            fields = b.split(",");
663.
            System.out.println(fields[0] + fields[1] + fields[2] + fields[3]);
664.
            found = 1;
665.
            }
666.
            }
667.
            if (found == 0) System.out.println("Not found");
668.
            fin.close();
669.
            }
670.
            }
681.
            import java.io.*;
682.
            class J0901 {
683.
            public static void main (String args[]) throws IOException {
684.
            int i = 0,t1,t2;
685.
            String b, status;
687.
            String fields[];
688.
            String[] recs1 = new String[10];
689.
            String[] recs2 = {"A,Active","R,Retire"};
```

```
690.
            String patternStr = ",";
692.
            FileReader fin = new FileReader("data.txt");
693.
            BufferedReader bin = new BufferedReader (fin);
694.
            while ((b = bin.readLine()) != null) {
695.
            recs1[i] = b;
696.
            i = i + 1;
697.
            }
698.
            fin.close();
699.
            t1 = i;
700.
            t2 = recs2.length;
702.
            for(int j=0;j<t1;j++) {
703.
            fields = recs1[j].split(patternStr);
704.
            System.out.print(fields[0] + fields[1] + fields[2]+fields[3]);
705.
            status = fields[3];
706.
            for(int k=0;k<t2;k++) {
707.
            fields = recs2[k].split(patternStr);
708.
            if (fields[0].equals(status)) {
709.
            System.out.println(fields[1]);
710.
            }
711.
            }
712.
            }
713.
            }
714.
            }
720.
            import java.io.*;
721.
            class J0902 {
722.
            public static void main (String args[]) throws IOException {
723.
            int i = 0,t1,t2;
724.
            String b, status;
725.
            String[] fields;
```

```
String[] recs1 = {"","","","","",""};
726.
727.
            String[] recs2 = new String[2];
728.
            FileReader fin = new FileReader("data.txt");
729.
            BufferedReader bin = new BufferedReader (fin);
            while ((b = bin.readLine()) != null) {
730.
731.
            recs1[i] = b;
732.
            i = i + 1;
733.
734.
            fin.close();
735.
            t1 = i;
736.
            i = 0;
738.
            FileReader fin2 = new FileReader("datas.txt");
739.
            BufferedReader bin2 = new BufferedReader (fin2);
740.
            while ((b = bin2.readLine()) != null) {
741.
            recs2[i] = b;
742.
            i = i + 1;
743.
            }
744.
            fin2.close();
745.
            t2 = i;
747.
            for(int j=0;j<t1;j++) {
748.
            fields = recs1[j].split(",");
749.
            System.out.print(fields[0] + fields[1] + fields[2]+fields[3]);
750.
            status = fields[3];
751.
            for(int k=0;k<t2;k++) {
752.
            fields = recs2[k].split(",");
753.
            if (fields[0].equals(status)) {
754.
            System.out.println(fields[1]);
755.
            }
756.
            }
```

```
757.
             }
758.
             }
759.
             }
764.
             class J1001 {
765.
             public static void main (String args[]) {
766.
             int tmp,x[] = \{5,6,1,2,9,12,9,3\};
767.
             for(int i=1;i<x.length;i++) {</pre>
768.
             for(int j=x.length-1;j>=i;j--) {
769.
             if(x[j-1] > x[j]) {
770.
             tmp = x[j];
771.
             x[j] = x[j-1];
772.
             x[j-1] = tmp;
773.
             }
774.
             }
775.
776.
             for(int i=0;i<x.length;i++) {</pre>
777.
             System.out.println(x[i]);
778.
             }
779.
             }
780.
785.
             import java.lang.*;
786.
             class J1002 {
787.
             public static void main (String args[]) {
             String tmp,x[] = {"ac","abc","adb","a","aa","acd","a a","a d"};
788.
789.
             System.out.println("Before sorting");
790.
             prtlist(x);
791.
             for(int i=1;i<x.length;i++) {</pre>
792.
             for(int j=x.length-1;j>=i;j--) {
793.
             if(x[j-1].compareTo(x[j])>0) {
```

```
794.
            tmp = x[j];
            x[j] = x[j-1];
795.
796.
            x[j-1] = tmp;
797.
798.
            }
799.
            }
800.
            System.out.println("After sorting");
801.
            prtlist(x);
802.
803.
            public static void prtlist(String[] x) {
804.
            for(int i=0;i<x.length;i++) {</pre>
805.
            System.out.println(x[i]);
806.
            }
807.
            }
808.
815.
            import java.applet.*;
816.
            import java.awt.*;
817.
            public class J1101 extends java.applet.Applet {
818.
            public void paint(Graphics g) {
819.
            g.setColor(new Color(240,240,240));
820.
            g.drawString("test",10,20);
821.
            }
822.
828.
            import java.applet.*;
829.
            import java.awt.*;
830.
            public class J1102 extends Applet {
831.
            int i,j;
832.
            String istr,p;
833.
            public void init() {
```

```
834.
            setBackground(Color.yellow);
835.
            p = getParameter("x");
836.
837.
            public void paint(Graphics g) {
            g.setColor(Color.black);
838.
839.
            g.drawString(p,0,10);
840.
            i = 1;
841.
            while (i <= 10) {
842.
            j = 10 * i;
843.
            istr= Integer.toString(i);
            g.drawString(istr,72,j); // column = 1 inch
844.
845.
            i++;
846.
            }
847.
            }
848.
            }
853.
            import java.applet.*;
854.
            import java.awt.*;
855.
            public class J1103 extends Applet implements Runnable{
856.
            Thread timer;
857.
            int row = 10;
858.
            public void paint(Graphics g) {
859.
            row = row + 2;
860.
            g.drawLine(5,row,30,row);
861.
862.
            public void start() {
863.
            timer = new Thread(this);
864.
            timer.start(); // start clock
865.
866.
            public void run() {
```

```
867.
           Thread me = Thread.currentThread();
868.
           while (timer == me) {
869.
           try {
871.
           Thread.currentThread().sleep(1000);
872.
           } catch (InterruptedException e) { }
873.
           repaint();
874.
875.
876.
881.
            import java.applet.*;
882.
           import java.awt.*;
883.
            public class J1104 extends Applet {
884.
           Image img;
885.
            public void init() {
886.
            setBackground(Color.green);
887.
            img = getImage(getDocumentBase(),"x.gif");
888.
889.
            public void paint(Graphics g) {
890.
           g.setColor(Color.black);
891.
           g.drawLine(5,10,30,40);
892.
           g.drawRect(50,50,80,80);
893.
           g.drawOval(50,50,20,30);
894.
           g.setColor(Color.white);
895.
           g.fillOval(50,50,20,30); // backgound is white
896.
           g.setColor(Color.red);
897.
           g.drawArc(40,30,55,55,0,120);
898.
           int[] x={0,80,100,5,10};
899.
           int[] y={0,50,80,80,30};
900.
            g.drawPolygon(x,y,5);
```

```
901.
           g.drawImage(img, 0, 200, this);
902.
           }
903.
           }
907.
           import java.applet.*;
           import java.awt.*;
908.
909.
           import java.awt.event.*;
910.
            public class J1105 extends Applet implements ActionListener {
911.
            Button b1 = new Button("1");
912.
            Label I1 = new Label("Hello");
913.
           TextField t1 = new TextField("1");
914.
           int row = 10;
915.
            public void paint(Graphics g) {
916.
            row = row + 10;
917.
           g.drawLine(5,row,30,row);
918.
919.
            public void init() {
920.
            setBackground(Color.red);
921.
            add(I1);
922.
           add(b1);
923.
           add(t1);
924.
           t1.addActionListener(this);
925.
           b1.addActionListener(this);
926.
           }
927.
            public void actionPerformed(ActionEvent e) {
928.
            int intb1 = Integer.parseInt(e.getActionCommand());
929.
            intb1 = intb1 + 1;
930.
           String s = Integer.toString(intb1);
931.
           l1.setText(s);
932.
            b1.setLabel(s);
```

```
933.
            t1.setText(s);
934.
            repaint();
935.
            }
936.
            }
937.
941.
            import java.io.*;
942.
            class J1201 {
943.
            public static void main(String args[]) throws IOException {
944.
            int buf=49;
945.
            while (buf != 51) {
946.
            if (buf >= 49 && buf <= 51) {
947.
            System.out.println("What is your option?");
948.
            System.out.println("1. print 1 to 10");
949.
            System.out.println("2. print 'ok'");
950.
            System.out.println("3. exit");
951.
953.
            buf = System.in.read();
954.
            switch (buf) {
955.
            case 49: // character 1
956.
            for (int i=1;i<=10;i++) {
957.
            System.out.println(i);
958.
            }
959.
            break;
960.
            case 50: // character 2
961.
            System.out.println("ok");
962.
            break;
963.
            case 51: break; // character 3
964.
            case 13: break;
965.
            case 10: break;
```

```
966.
            default:
967.
            System.out.println("Nothing to do");
968.
            break;
969.
            }
            }
970.
971.
            System.out.println("See you again");
972.
            }
973.
            }
977.
            import java.io.*;
978.
            class J1202 {
979.
            public static void main(String args[]) throws IOException {
980.
            BufferedReader stdin = new BufferedReader(new InputStreamReader(System.in));
981.
            String buf=" ";
982.
            while (!buf.equals("3")) {
983.
            System.out.println("What is your option?");
984.
            System.out.println("1. print 1 to 10");
985.
            System.out.println("2. print 'ok'");
986.
            System.out.println("3. exit");
987.
            buf = stdin.readLine();
988.
            if (buf.equals("1"))
989.
            for (int i=1;i<=10;i++) System.out.println(i);</pre>
990.
            if (buf.equals("2")) System.out.println("ok");
991.
            }
992.
            System.out.println("See you again");
993.
            }
994.
998.
            import java.io.*;
999.
            class J1203 {
1000.
            public static void main(String args[]) throws IOException {
```

```
1001.
            BufferedReader stdin = new BufferedReader(new InputStreamReader(System.in));
1002.
            String buf=" ";
1003.
            while (!buf.equals("3")) {
1004.
            System.out.println("What is your option?");
            System.out.println("1. print 1 to 10");
1005.
1006.
            System.out.println("2. print 'ok'");
1007.
            System.out.println("3. exit");
1008.
            buf = stdin.readLine();
1009.
            if (buf.equals("1")) oho1();
1010.
            if (buf.equals("2")) { oho2(); }
1011.
            }
1012.
            System.out.println("See you again");
1013.
            }
1014.
            public static void oho1() {
1015.
            for (int i=1;i<=10;i++) {
1016.
            System.out.println(i);
1017.
            }
1018.
            }
1019.
            public static void oho2() {
1020.
            System.out.println("ok");
1021.
            }
1022.
            }
1024.
            import java.io.*;
1025.
            class Pollweb {
1026.
            public static void main (String args[]) throws IOException {
1027.
            int i=0;
1028.
            int questionhave = 14;
1029.
            int q[] = new int[questionhave];
1030.
            String b;
```

```
1031.
            String[] fields;
1032.
            String patternStr = ",";
1033.
            FileReader fin = new FileReader("pollweb.txt");
1034.
            BufferedReader bin = new BufferedReader (fin);
            while ((b = bin.readLine()) != null) {
1035.
1036.
            fields = b.split(patternStr);
1037.
            for (int j=1;j<=questionhave-1;j++)</pre>
1038.
            q[j]+= Integer.parseInt(fields[j]);
1039.
            i = i + 1;
1040.
            }
1041.
            System.out.println("Total questions: " + i);
1042.
            for (int j=1;j<=questionhave-1;j++)
1043.
            System.out.println(j+":"+q[j]+" \mid "+(q[j] * 100 / i)+"%");
1044.
            fin.close();
1045.
            }
1046.
1048.
            class Hello1 {
1049.
            public static void main(String args[]) {
1050.
            System.out.println("hello");
1051.
            }
1052.
            }
1054.
            import java.lang.*;
1055.
            import java.applet.*;
1056.
            import java.awt.Graphics;
1057.
            public class Hello2 extends java.applet.Applet {
1058.
            public void paint(Graphics g){
1059.
            g.drawString("hello",10,10);
1060.
            }
1061.
            }
```

```
1063.
            class Pyramid01 {
1064.
            public static void main(String args[]) {
1065.
            int k = 4;
1066.
            for (int i=1;i<=k;i++) {
            for (int j=2;j<=i;j++) { System.out.print(" "); }</pre>
1067.
1068.
            System.out.print(i+""+i);
            for (int j=k;j>=(i+1);j--) { System.out.print("**"); }
1069.
1070.
            System.out.println(i+""+i);
1071.
            }}}
1073.
            class Pyramid02 {
1074.
            public static void main(String args[]) {
1075.
            int k = 4;
1076.
            for (int i=1;i<=k;i++) {
1077.
            for (int j=i;j<=(i+2);j++) { System.out.print(j); }
1078.
            for (int j=1;j<=(2+i);j++) { System.out.print("*"); }
1079.
            System.out.println();
1080.
            } } }
1082.
            class Pyramid03 {
1083.
            public static void main(String args[]) {
1084.
            int k = 4;
1085.
            for (int i=1;i<=k;i++) {
1086.
            System.out.print(i+""+(i+4));
1087.
            for (int j=1; j <= (4+i); j++) {
1088.
            System.out.print("*");
1089.
            }
1090.
            System.out.println();
1091.
            }}}
1093.
            class Pyramid04 {
1094.
            public static void main(String args[]) {
```

```
1095.     int k = 4;
1096.     for (int i=1;i<=k;i++) {
1097.         for (int j=1;j<=i;j++) { System.out.print("*"); }
1098.         for (int j=i;j>=2;j--) { System.out.print(j); }
1099.         for (int j=1;j<=i;j++) { System.out.print(j); }
1100.         System.out.println();
1101.         } }</pre>
```