

Java講座2017

～第1回～

解答例

演習①解答

▶ ほんの1例です

```
Sample01.java Ex01.java Sample02.java Ex02.java
1 package lesson01;
2
3 import javax.swing.JOptionPane;
4
5 public class Ex01 {
6     public static void main(String[] args) {
7         String str = JOptionPane.showInputDialog("繰り返し回数を入力");
8         int num = Integer.parseInt(str);
9
10        for (int i = 0; i < num; i++) {
11            int p1 = (int) (Math.random() * 6 + 1);
12            int p2 = (int) (Math.random() * 6 + 1);
13            if (p1 > p2) {
14                System.out.println("プレイヤー1の勝ち");
15            } else if (p1 < p2) {
16                System.out.println("プレイヤー2の勝ち");
17            } else {
18                System.out.println("引き分け");
19            }
20        }
21    }
22 }
```

演習②解答例

```
package lesson01;

import javax.swing.JOptionPane;

public class Ex02 {
    ▶ public static void main(String[] args) {
        int n = inputNum();
        String[] favorites = inputArray(n);
        outputArray(favorites);
    }

    ▶ static int inputNum() {
        String str = JOptionPane.showInputDialog("繰り返し回数を入力");
        int n = Integer.parseInt(str);
        return n;
    }

    ▶ static String[] inputArray(int length) {
        String[] array = new String[length];
        for (int i = 0; i < array.length; i++) {
            array[i] = JOptionPane.showInputDialog("好きなもの" + i + "番目を入力");
        }
        return array;
    }

    ▶ static void outputArray(String[] array) {
        for (int i = 0; i < array.length; i++) {
            System.out.println("好きなもの" + i + "番目は" + array[i]);
        }
    }
}
```

演習③解答例

```
package lesson01;

public class Ex03 {
    public static void main(String[] args) {
        Ex03Class[] students = new Ex03Class[3];
        students[0] = new Ex03Class("たかし", 60, 80);
        students[1] = new Ex03Class("たけし", 20, 30);
        students[2] = new Ex03Class("たくし", 60, 10);

        for (int i = 0; i < students.length; i++) {
            int e = students[i].getScoreE();
            int m = students[i].getScoreM();
            if ((e + m) > 60) {
                System.out.println(students[i].getN() + "さんの英語は" + e + "点、数学は"
                    + m + "点");
            }
        }
    }
}
```

```
package lesson01;

public class Ex03Class {
    private String name;
    private int scoreEnglish;
    private int scoreMath;

    Ex03Class(String name, int scoreEnglish, int scoreMath) {
        this.name = name;
        this.scoreEnglish = scoreEnglish;
        this.scoreMath = scoreMath;
    }

    public String getN() {
        return name;
    }

    public int getScoreE() {
        return scoreEnglish;
    }

    public int getScoreM() {
        return scoreMath;
    }
}
```

演習④解答例

```
package lesson01;

public class Ex04ArrayList {
    private int size;
    private int capacity;
    private String[] arrays;
    final int INITIAL_CAPACITY = 5;
    final int ADD_SIZE = 5;

    Ex04ArrayList() {
        capacity = INITIAL_CAPACITY;
        size = 0;
        arrays = new String[capacity];
    }

    void add(String name) {
        if (size >= capacity) {
            capacity += ADD_SIZE;
            String[] newArrays = new String[capacity];
            for (int i = 0; i < size; i++) {
                newArrays[i] = arrays[i];
            }
            arrays = newArrays;
        }
        arrays[size] = name;
        size++;
    }
}
```

```
int size() {
    return size;
}

String get(int index) {
    if (index > size) {
        return null;
    } else {
        return arrays[index];
    }
}

boolean isEmpty() {
    if (size == 0) {
        return true;
    } else {
        return false;
    }
}
```