

JAVA勉強会
第2章
一問題一

問題2-3

```
public class Main {  
    public static void main(String[] args) throws Exception {  
        // Your code here!  
        int[] a = new int[5];  
        boolean[] b = new boolean[5];  
        String[] c = new String[5];  
        System.out.println("a[0]=" + a[0] +  
                            " b[0]=" + b[0] +  
                            " c[0]=" + c[0]);  
    }  
}
```

配列の変数は
初期値が代入されない限り
型ごとのデフォルト値が入る
(p.41)

出力 入力 コメント 0

a[0]=0 b[0]=false c[0]=null

問題2-5

The screenshot shows the Paiza.IO online IDE interface. At the top, there's a blue header with the Paiza.IO logo, navigation links like '新規コード' (New Code), '一覧' (List), and 'ターミナル' (Terminal), and user options like 'サインアップ' (Sign Up) and 'ログイン' (Login). Below the header, a green bar indicates a successful execution with 'Success' and social media share buttons. The main area is a dark-themed code editor with a Java file named 'Main.java'. The code is as follows:

```
1 public class Main {  
2     public static void main(String[] args) throws Exception {  
3         // Your code here!  
4         int val1 = args[0];  
5         int val2 = args[1];  
6         System.out.println(val1+val2);  
7     }  
8 }  
9
```

Below the code editor, there's a green button labeled '実行 (Ctrl-Enter)' (Run). To the right of the code editor, there's a toolbar with icons for user profile, help, settings, clock, undo, redo, star, and lock. At the bottom, there's a white output area with tabs for '出力' (Output), '入力' (Input), and 'コメント' (Comments). The output tab is active, showing the result '1 2'. A 'Leave a message' button is located in the bottom right corner.

出力 | 入力 | コメント 0 (0.12 sec)

1 2

Leave a message

問題2-5

The screenshot shows the Paiza.IO online IDE interface. The code editor displays the following Java code:

```
1 public class Main {  
2     public static void main(String[] args) throws Exception {  
3         // Your code here!  
4         int val1 = args[0];  
5         int val2 = args[1];  
6         System.out.println(val1+val2);  
7     }  
8 }  
9
```

A red box highlights the error messages in the console:

```
Main.java:4: error: incompatible types: String cannot be converted to int  
    int val1 = args[0];  
                ^  
Main.java:5: error: incompatible types: String cannot be converted to int  
    int val2 = args[1];  
                ^  
2 errors
```

A red callout points to the variable declarations `int val1 = args[0];` and `int val2 = args[1];` with the text **String型**, indicating that `args` is an array of `String` objects, not `int`.

問題2-5

The screenshot shows the paiza.io web interface. The browser address bar displays the URL <https://paiza.io/projects/PKC8rQdF56sDkBeYJs5otg>. The page header includes the paiza.io logo, navigation links for '新規コード' (New Code), '一覧' (List), and 'ターミナル' (Terminal), along with a language selector set to '日本語' and buttons for 'サインアップ' (Sign Up) and 'ログイン' (Login). Below the header, a green bar indicates a successful execution with the text 'Success' and social media sharing options for Twitter and Facebook. The main editor area shows a Java file named 'Main.java' with the following code:

```
1 public class Main {
2     public static void main(String[] args) throws Exception {
3         // Your code here!
4         int[][] ary = {{0},{1,2},{3,4,5},{6,7,8,9}};
5         System.out.println(ary[3][1]);
6         System.out.println(ary[1][3]);
7     }
8 }
9
```

Below the code editor, there is a green button labeled '実行 (Ctrl-Enter)' (Execute) and a row of icons for user profile, help, settings, clock, refresh, star, and share. At the bottom, there is a section for '出力' (Output), '入力' (Input), and 'コメント' (Comments), with a '0' comment count. The execution time '(0.12 sec)' is shown on the right. A 'Leave a message' button is located in the bottom right corner.

問題2-5

The screenshot shows the paiza.io online IDE interface. At the top, there's a navigation bar with "paiza.io" logo, "新規コード" (New Code), "一覧" (List), and "ターミナル" (Terminal). The language is set to "Java". Below the navigation bar, there's a text input field "Enter a title here". The main editor area shows a Java file named "Main.java" with the following code:

```
1 public class Main {  
2     public static void main(String[] args) throws Exception {  
3         // Your code here!  
4         int[][] ary = {{0},{1,2},{3,4,5},{6,7,8,9}};  
5         System.out.println(ary[3][1]);  
6         System.out.println(ary[1][3]);  
7     }  
8 }  
9
```

Below the code editor, there's a "Standard error message" section. It shows the following error:

```
Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: 3  
    at Main.main(Main.java:6)
```

At the bottom, there's a "コマンドプロンプト" (Command Prompt) window showing the command execution:

```
C:\Users\%niman\Desktop\java_2\2-6>java Main  
7  
Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: 3  
    at Main.main(main.java:6)  
C:\Users\%niman\Desktop\java_2\2-6>
```

paiza.io 新規コード 一覧 ターミナル 日本語 サインアップ ログイン

Java Enter a title here

Main.java File1 +

Runtime error(Exit status:1)

```
1 public class Main {
2     public static void main(String[] args) throws Exception {
3         // Your code here!
4         int[][] ary = {{0},{1,2},{3,4,5},{6,7,8,9}};
5         System.out.println(ary[3][1]);
6         System.out.println(ary[1][3]);
7     }
8 }
9
```

	0	1	2	3
0	0			
1	1	2		
2	3	4	5	
3	6	7	8	9

Index out of Bounds

7

問題2-7

- `A:ArrayList list = new ArrayList<Character>();`
 - ○:片方だけでジェネリックス指定は可能
- `B:ArrayList<char> list = new ArrayList<Character>()`
 - ×:ジェネリックスの型が左右で異なる(p.51)
- `C:ArrayList<character> list = new ArrayList<Character>();`
 - ○:ジェネリックスの型が等しく問題ない

問題2-7

- `D:ArrayList<Object> list = new ArrayList<Character>()`
 - ×:ジェネリックスの型が左右で異なる
- `E:ArrayList list = new ArrayList(100)`
 - ○:ジェネリックスを宣言しない形式
- `F:ArrayList<character> list = new ArrayList<>();`
 - ○:ダイヤモンド演算子(p.53-54)を利用した例

問題2-9

The screenshot shows the Paiza.IO online IDE interface. The browser address bar displays the URL <https://paiza.io/projects/PKC8rQdF56sDkBeYJs5otg>. The Paiza.IO logo and navigation links (新規コード, 一覧, ターミナル) are visible in the top blue bar. On the right, there are links for 日本語, サインアップ, ログイン, and a help icon. A "Beta" badge is on the left. Below the navigation bar, a "Java" dropdown menu is open, and a text input field "Enter a title here" is present. The main editor area shows a Java file named "Main.java" with the following code:

```
1 public class Main {
2     public static void main(String[] args) throws Exception {
3         // Your code here!
4         Integer i1 = new Integer(1);
5         Integer i2 = new Integer(2);
6
7         // [A~Fのいずれか]
8
9         list.add(i1); list.add(i2);
10        System.out.println(list);
11
12    }
13 }
14
```

Below the code editor, there is a green bar with "Success" and social media sharing options (ツイート, Share 0). At the bottom, there is a toolbar with icons for running (実行 (Ctrl-Enter)), settings, and other functions. The output panel at the bottom shows "出力 入力 コメント 0" and a timer "(0.12 sec)". A "Leave a message" button is in the bottom right corner.

問題2-9:A

paiza.io

Java

Enter a title here

Main.java

```
1 import java.util.*;
2 public class Main {
3     public static void main(String[] args) throws Exception {
4         // Your code here!
5         Integer i1 = new Integer(1);
6         Integer i2 = new Integer(2);
7         //A
8         ArrayList<Integer> list = new ArrayList<Object>();
9
10        list.add(i1); list.add(i2);
11        System.out.println(list);
12    }
13 }
```

Compile error

実行 (Ctrl-Enter)

コンパイルエラー 入力 コメント 0

Main.java:8: error: incompatible types: ArrayList<Object> cannot be converted to ArrayList<Integer>
ArrayList<Integer> list = new ArrayList<Object>();
^

Note: Main.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
1 error

Leave a message

問題2-9:B

paiza.io 新規コード 一覧 ターミナル 日本語 サインアップ ログイン

Java Enter a title here

Main.java

```
1 import java.util.*;
2 public class Main {
3     public static void main(String[] args) throws Exception {
4         // Your code here!
5         Integer i1 = new Integer(1);
6         Integer i2 = new Integer(2);
7         //B
8         ArrayList<List> list = new ArrayList<List>();
9
10        list.add(i1); list.add(i2);
11        System.out.println(list);
12    }
13 }
```

Compile error

実行 (Ctrl-Enter)

コンパイルエラー 入力 コメント 0

Main.java:10: error: no suitable method found for add(Integer)
list.add(i1); list.add(i2);
^
method Collection.add(List) is not applicable
(argument mismatch; Integer cannot be converted to List)
method List.add(List) is not applicable
(argument mismatch; Integer cannot be converted to List)
method AbstractCollection.add(List) is not applicable
(argument mismatch; Integer cannot be converted to List)
method AbstractList.add(List) is not applicable

Leave a message

問題2-9:C

paiza.io

Java

Enter a title here

Main.java

```
1 import java.util.*;
2 public class Main {
3     public static void main(String[] args) throws Exception {
4         // Your code here!
5         Integer i1 = new Integer(1);
6         Integer i2 = new Integer(2);
7         //C
8         List<Integer> list = new ArrayList<Integer>();
9
10        list.add(i1); list.add(i2);
11        System.out.println(list);
12    }
13 }
```

実行 (Ctrl-Enter)

出力 コンパイルエラー 入力 コメント 0

[1, 2]

0.12 sec

Leave a message

問題2-9:D

paiza.io 新規コード 一覧 ターミナル 日本語 サインアップ ログイン

Java Enter a title here

Test.java

Compile error

```
1 import java.util.*;
2 public class Test{
3     public static void main(String[] args){
4         Integer i1 = new Integer(1);
5         Integer i2 = new Integer(2);
6         //D
7         List<Object> list = new ArrayList<Integer>();
8
9         list.add(i1); list.add(i2);
10        System.out.println(list);
11    }
12 }
```

実行 (Ctrl-Enter)

コンパイルエラー 入力 コメント 0

Test.java:7: error: incompatible types: ArrayList<Integer> cannot be converted to List<Object>
List<Object> list = new ArrayList<Integer>();
^

Note: Test.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.

1 error

Leave a message

問題2-9:E

Beta

paiza.io

新規コード

一覧

ターミナル

日本語

サインアップ

ログイン

?

Java

Enter a title here

Main.java

Compile error

```
1 import java.util.*;
2 public class Main{
3     public static void main(String[] args){
4         Integer i1 = new Integer(1);
5         Integer i2 = new Integer(2);
6         //E
7         ArrayList<int> list = new ArrayList<int>();
8
9         list.add(i1); list.add(i2);
10        System.out.println(list);
11    }
12 }
```

実行 (Ctrl-Enter)

コンパイルエラー 入力 コメント 0

Main.java:7: error: unexpected type
ArrayList<int> list = new ArrayList<int>();
 ^
required: reference
found: int
Main.java:7: error: unexpected type

Leave a message

問題2-9:F

paiza.io 新規コード 一覧 ターミナル 日本語 サインアップ ログイン

Java Enter a title here

Main.java

```
1 import java.util.*;
2 public class Main{
3     public static void main(String[] args){
4         Integer i1 = new Integer(1);
5         Integer i2 = new Integer(2);
6         //F
7         ArrayList list = new ArrayList();
8
9         list.add(i1); list.add(i2);
10        System.out.println(list);
11    }
12 }
```

Success ツイート Share 0

実行 (Ctrl-Enter)

出力 コンパイルエラー 入力 コメント 0 (0.13 sec)

[1, 2]

Text

Leave a message