

First Programs

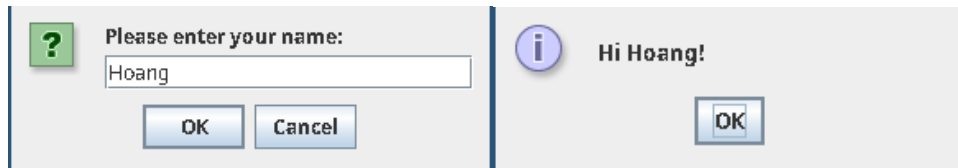
Hello, World!

```
endeavour@inspiron143467 ~/00P.20242/Lab01/Code (git)-[main] % java HelloWorld
Xin chao
cac ban!
Hello World!
```

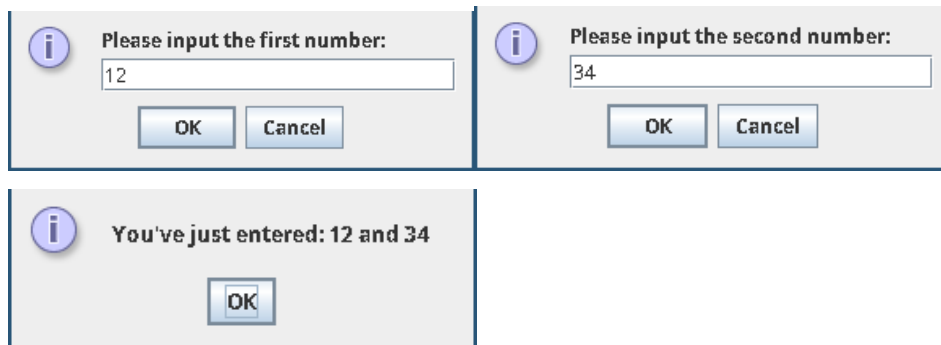
First Dialog









Hello Name Dialog



Show Two Numbers






Number Calculator






 Input the first number <input type="text" value="34"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	 Input the second number <input type="text" value="12"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>		
 The sum is 46.0 <input type="button" value="OK"/>	 The difference is 22.0 <input type="button" value="OK"/>	 The product is 408.0 <input type="button" value="OK"/>	 The quotient is 2.8333333333333335 <input type="button" value="OK"/>

Solve First-degree Equation

With $a \neq 0$

 Enter a: <input type="text" value="5"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	 Enter b: <input type="text" value="10"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	 x = -2.0 <input type="button" value="OK"/>
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With $a = 0$

 Enter a: <input type="text" value="0"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	 Enter b: <input type="text" value="0"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	 Infinite solutions <input type="button" value="OK"/>
	 Enter b: <input type="text" value="1"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	 No solution <input type="button" value="OK"/>

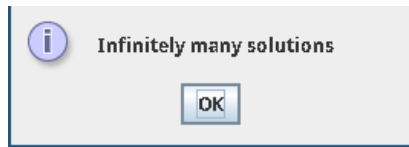
Solve Linear System

(Input phase is omitted for clarity)

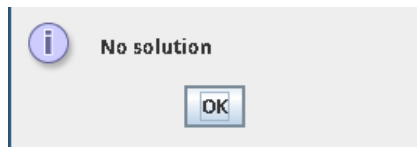
With $\begin{cases} x_{11} + 2x_{12} = 3 \\ 4x_{21} + 5x_{22} = 6 \end{cases}$:

 x1 = -1.0 and x2 = 2.0 <input type="button" value="OK"/>
--

With $\begin{cases} x_{11} + 2x_{12} = 3 \\ 2x_{21} + 4x_{22} = 6 \end{cases}$:



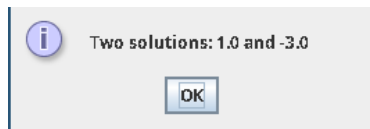
With $\begin{cases} x_{11} + 2x_{12} = 3 \\ 2x_{21} + 4x_{22} = 5 \end{cases}$:



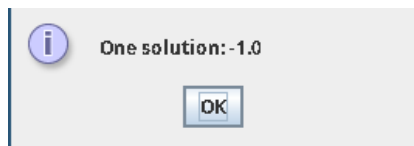
Second-degree equation

With $a \neq 0$

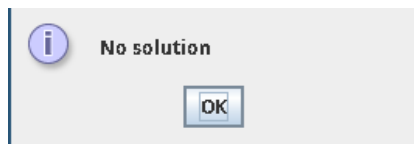
With $x^2 + 2x - 3 = 0$:



With $x^2 + 2x + 1 = 0$:



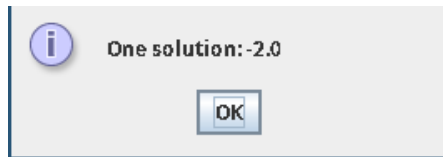
With $x^2 + 2x + 2 = 0$:



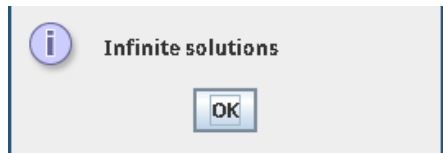
With $a = 0$

The program also acts as a first-degree equation solver:

With $x + 2 = 0$:



With $0x = 0$:

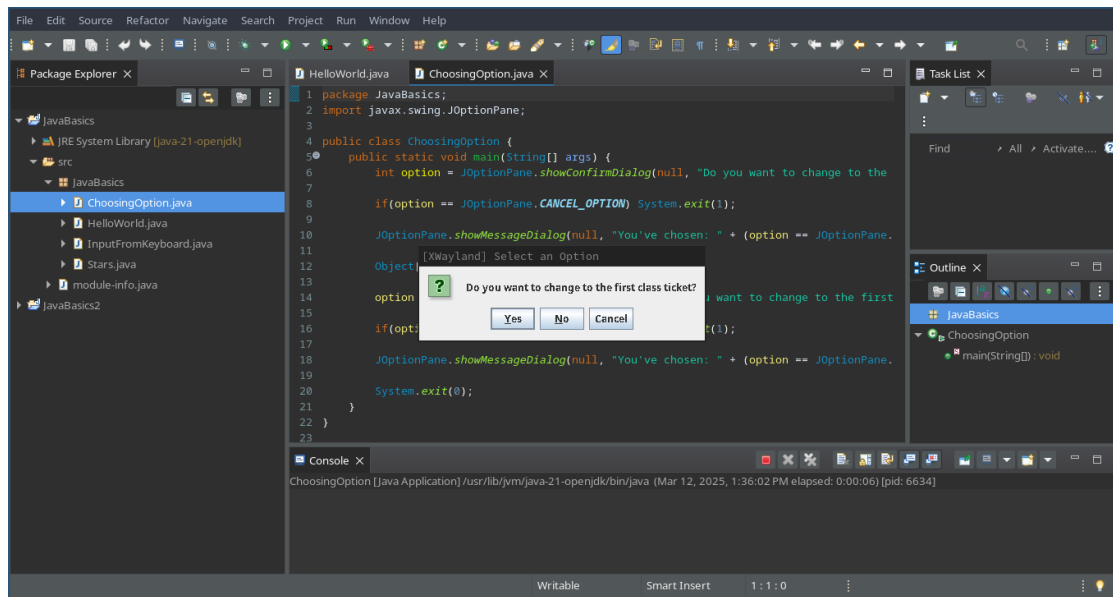


With $0x + 1 = 0$:

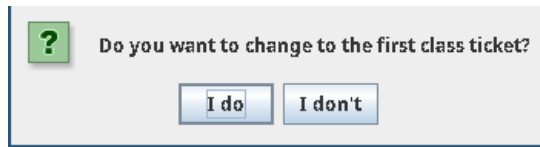


Eclipse

Choosing Option:



With custom options:



Input From Keyboard

```

Console X
<terminated> InputFromKeyboard [Java Application] /usr/lib/jvm/java-2
What's your name?
Hoang
How old are you?
19
How tall are you (m)?
1.75
Mrs/Ms. Hoang, 19 years old. Your height is 1.75m.

```

Stars

```

<terminated> Stars [Java 7
5
  *
 ***
*****
*****
*****
*****
*****

```

Number of days

```

Jan 2020
The answer is: 31 days.
Febr 1222
Please enter again
Feb. 1900
The answer is: 28 days.

```

Sorting array

```

Enter array size: 7
Enter the values of the array: 5 9 2 24 7 3 13
2 3 5 7 9 13 24
Sum: 63
Average: 9.0

```

Add two matrices:

```
Enter numbers of rows and columns:
4 6
Enter values of matrix 1:
2 5 1 8 3 7
4 6 9 2 5 1
7 3 2 6 8 4
5 9 7 1 4 2
Enter values of matrix 2:

1 7 3 5 6 2
8 2 4 7 9 3
6 1 5 9 2 8
3 4 8 6 7 5
The result:
3      12      4      13      9      9
12      8      13      9      14      4
13      4      7      15      10      12
8      13      15      7      11      7
Sum:232  Average:9.0
```