Simple Command Line Debugger (JDI)

Usage

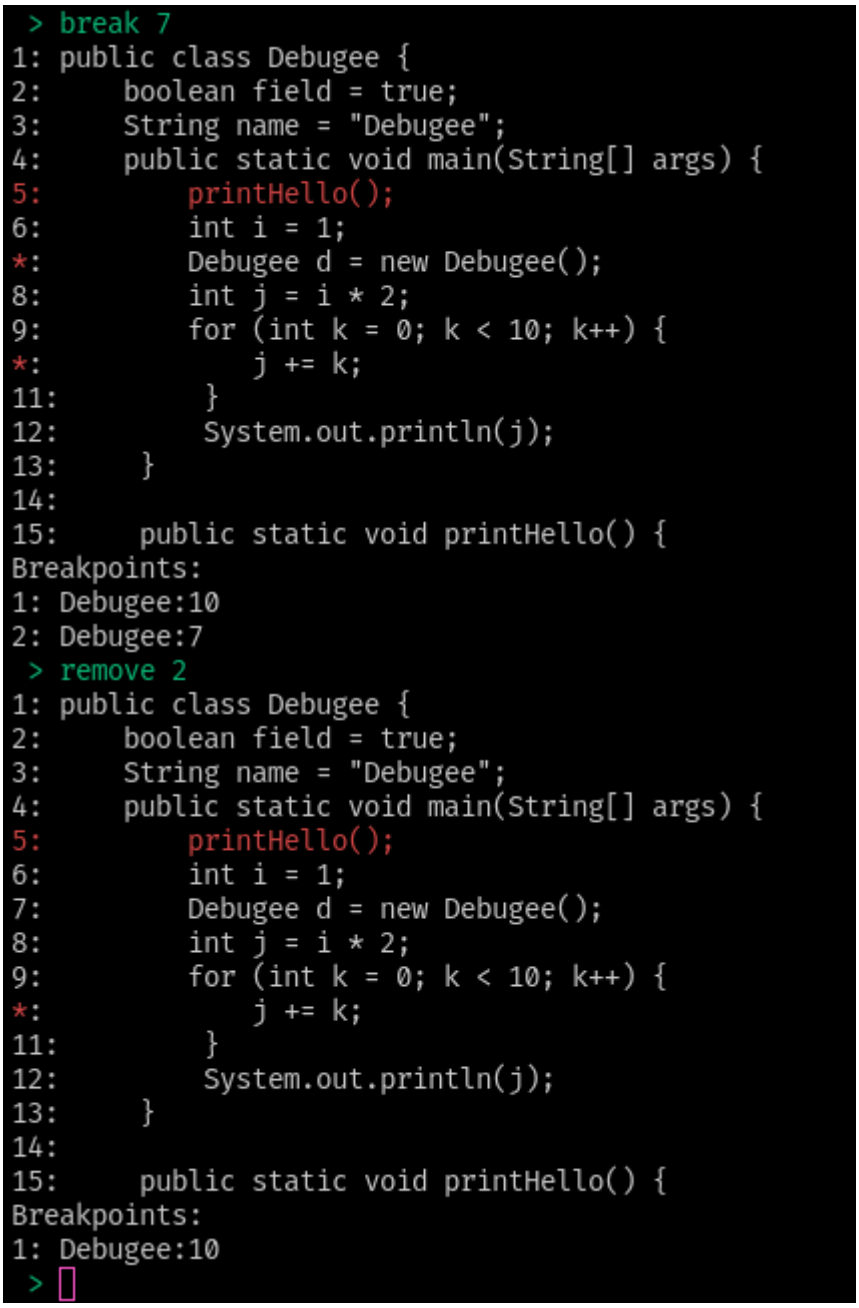
1. `javac -g Debugee.java`
2. launch debugger
3. input command "launch Debugee"
4. use "help" to list other commands

Example

launching:

```
 > launch Debugee
VM started
1: public class Debugee {
2:     boolean field = true;
3:     String name = "Debugee";
4:     public static void main(String[] args) {
5:         printHello();
6:         int i = 1;
7:         Debugee d = new Debugee();
8:         int j = i * 2;
9:         for (int k = 0; k < 10; k++) {
10:            j += k;
11:         }
12:         System.out.println(j);
13:     }
14:
15:     public static void printHello() {
 > break 10
1: public class Debugee {
2:     boolean field = true;
3:     String name = "Debugee";
4:     public static void main(String[] args) {
5:         printHello();
6:         int i = 1;
7:         Debugee d = new Debugee();
8:         int j = i * 2;
9:         for (int k = 0; k < 10; k++) {
*:             j += k;
11:         }
12:         System.out.println(j);
13:     }
14:
15:     public static void printHello() {
Breakpoints:
1: Debugee:10
 >
```

breakpoints:



stepping, locals, and stack trace:

```
 > into
Event: StepEvent@Debugee:16 in thread main
Current position: printHello at line 16
7:          Debugee d = new Debugee();
8:          int j = i * 2;
9:          for (int k = 0; k < 10; k++) {
*:              j += k;
11:         }
12:         System.out.println(j);
13:     }
14:
15:     public static void printHello() {
16:         System.out.println("Hello World");
17:     }
18: }
 > into
Event: StepEvent@java.io.PrintStream:1027 in thread main
Current position: println at line 1027
java.lang.String x = "Hello World"
Source file not found in local directory: java/io/PrintStream.java
1018:
1019:     /**
1020:      * Prints a String and then terminate the line.  This method behaves as
1021:      * though it invokes {@link #print(String)} and then
1022:      * {@link #println()}.
1023:      *
1024:      * @param x  The {@code String} to be printed.
1025:      */
1026:     public void println(String x) {
1027:         if (getClass() == PrintStream.class) {
1028:             writeln(String.valueOf(x));
1029:         } else {
1030:             synchronized (this) {
1031:                 print(x);
1032:                 newLine();
1033:             }
1034:         }
1035:     }
1036:
1037:     /**
 > locals
java.lang.String x = "Hello World"
 > trace
java.io.PrintStream.println(java.lang.String) at line 1027
Debugee.printHello() at line 16
Debugee.main(java.lang.String[]) at line 5
 >
```

other step commands:

```
 > out
Event: StepEvent@Debugee:17 in thread main
Current position: printHello at line 17
8:          int j = i * 2;
9:          for (int k = 0; k < 10; k++) {
*:              j += k;
11:         }
12:         System.out.println(j);
13:     }
14:
15:     public static void printHello() {
16:         System.out.println("Hello World");
17:     }
18: }
 > out
Event: StepEvent@Debugee:6 in thread main
Current position: main at line 6
java.lang.String[] args = []
1: public class Debugee {
2:     boolean field = true;
3:     String name = "Debugee";
4:     public static void main(String[] args) {
5:         printHello();
6:         int i = 1;
7:         Debugee d = new Debugee();
8:         int j = i * 2;
9:         for (int k = 0; k < 10; k++) {
*:              j += k;
11:         }
12:         System.out.println(j);
13:     }
14:
15:     public static void printHello() {
16:         System.out.println("Hello World");
 > over
Event: StepEvent@Debugee:7 in thread main
Current position: main at line 7
java.lang.String[] args = []
int i = 1
1: public class Debugee {
2:     boolean field = true;
3:     String name = "Debugee";
4:     public static void main(String[] args) {
5:         printHello();
6:         int i = 1;
7:         Debugee d = new Debugee();
8:         int j = i * 2;
9:         for (int k = 0; k < 10; k++) {
*:              j += k;
11:         }
12:         System.out.println(j);
13:     }
14:
15:     public static void printHello() {
16:         System.out.println("Hello World");
17:     }
 >
```

continue to breakpoint:

```
1: public class Debugee {
2:     boolean field = true;
3:     String name = "Debugee";
4:     public static void main(String[] args) {
5:         printHello();
6:         int i = 1;
7:         Debugee d = new Debugee();
8:         int j = i * 2;
9:         for (int k = 0; k < 10; k++) {
10:             j += k;
11:         }
12:         System.out.println(j);
13:     }
14:
15:     public static void printHello() {
16:         System.out.println("Hello World");
17:     }
18: }
 > locals
java.lang.String[] args = []
int i = 1
Debugee d = { field = true , name = "Debugee" , }
int j = 2
int k = 0
 > continue
Event: BreakpointEvent@Debugee:10 in thread main
Hit breakpoint: 10 in Debugee.main(java.lang.String[])
java.lang.String[] args = []
int i = 1
Debugee d = { field = true , name = "Debugee" , }
int j = 2
int k = 1
1: public class Debugee {
2:     boolean field = true;
3:     String name = "Debugee";
4:     public static void main(String[] args) {
5:         printHello();
6:         int i = 1;
7:         Debugee d = new Debugee();
8:         int j = i * 2;
9:         for (int k = 0; k < 10; k++) {
10:             j += k;
11:         }
12:         System.out.println(j);
13:     }
14:
15:     public static void printHello() {
16:         System.out.println("Hello World");
17:     }
18: }
 > locals
java.lang.String[] args = []
int i = 1
Debugee d = { field = true , name = "Debugee" , }
int j = 2
int k = 1
 >
```