

Do we need forward declarations in Java?

Predict output of the following Java program.

```
// filename: Test2.java

// main() function of this class uses Test1 which is declared later in
// this file
class Test2 {
    public static void main(String[] args) {
        Test1 t1 = new Test1();
        t1.fun(5);
    }
}

class Test1 {
    void fun(int x) {
        System.out.println("fun() called: x = " + x);
    }
}
```

Output:

```
fun() called: x = 5
```

The Java program compiles and runs fine. Note that *Test1* and *fun()* are not declared before their use. Unlike C++, we don't need **forward declarations** in Java. Identifiers (class and method names) are recognized automatically from source files. Similarly, library methods are directly read from the libraries, and there is no need to create header files with declarations. Java uses naming scheme where package and public class names must follow directory and file names respectively. This naming scheme allows Java compiler to locate library files.

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```
/* Paste your code here (You may delete these lines if not writing code)
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I guess this is what distinguishes a 1-pass and 2-pass compiler.
With a one pass compiler the above code does not compile.

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