

PLD Assignment 3

Ask

15. marts 2022

Indhold

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1 A3.1

1.1 a)

The compiler rejects the program with a compile error, since the method "bingoString()" isn't defined for the generic type T.

This is the error message I get when I try to compile the program

```
Bingo.java:9: error: cannot find symbol
    System.out.println(t.bingoString());
                        ^
symbol: method bingoString()
location: variable t of type T
where T is a type-variable:
  T extends Object declared in class Bingo
1 error
```

1.2 b)

The following code should compile. But throw a NullPointerException. Otherwise, since we don't really know what BingoString is supposed to do in this specific code snippet, a runtime error could be caused by a wrong cast.

```
1  abstract class myAbstractClass {
2      public abstract String bingoString();
3  }
4
5  class Bingo<T extends myAbstractClass> {
6
7      public void dingo(T t) {
8          System.out.println(t.bingoString());
9      }
10
11
12     public static void main(String[] args) {
13         Bingo<myAbstractClass> myObj = new Bingo<>();
14         myObj.dingo(null);
15     }
16 }
```

1.3 c)

Reusing the same piece of code, as in 1b only with a minor tweak. This code will compile but do nothing.

```
1  abstract class myAbstractClass {  
2      public abstract String bingoString();  
3  }  
4  
5  class Bingo<T extends myAbstractClass> {  
6  
7      public void dingo(T t) {  
8          System.out.println(t.bingoString());  
9      }  
10  
11     public static void main(String[] args) {  
12  
13     }  
14 }
```

1.4 d)

Yes the code would lead to a runtime error.

1.5 e)

2 A3.2

2.1 a)

2.2 b)

3 A3.3

3.1 a)

Plop is a function, that takes an empty list and some value and insert that value into the list. In the "second" line plop is called with a list pattern and the argument w. And then insert U and V in the start of the list and then insert w at the end of the instantiated list.

3.2 b)

4 A3.4

4.1 a)

4.2 b)

4.3 c)

4.4 d)

5 A3.5

6 A3.6