Lesson 1-5:
Method and Constructor References

ORACLE®

Method References

- Method references let us reuse a method as a lambda expression

```
FileFilter x = File f -> f.canRead();
```

⬇

```
FileFilter x = File::canRead;
```

ORACLE

Method References

More Detail

- Format: `target_reference::method_name`
- Three kinds of method reference
    - Static method
    - Instance method of an arbitary type
    - Instance method of an existing object

Method References

Rules For Construction

Lambda	`(args) -> ClassName.staticMethod(args)`
Method Ref	`ClassName::staticMethod`

Lambda	`(arg0, rest) -> arg0.instanceMethod(rest)`
Method Ref	instanceOf `ClassName::instanceMethod`

Lambda	`(args) -> expr.instanceMethod(args)`
Method Ref	`expr::instanceMethod`

ORACLE

4

Method References

Examples

Lambda	`(String s) -> System.out.println(s)`
Method Ref	`System.out::println`
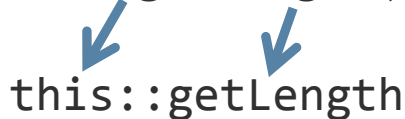
Lambda	`(String s, int i) -> s.substring(i)`
Method Ref	`String::substring`

Lambda	`Axis a -> getLength(a)`
Method Ref	`this::getLength`

ORACLE

Constructor References

- Same concept as a method reference
  - For the constructor

```
Factory<List<String>> f = () -> return new ArrayList<String>();
```

```
Factory<List<String>> f = ArrayList<String>::new;
```

ORACLE

Section 5

Summary

- Method references provide a shorthand notation for simple Lambdas

- Three types depending on how they are used

- Can also be used for constructors

ORACLE