Lesson 1-5:
Method and Constructor References

Method References

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

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

FileFilter x = File::canRead;
```

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Method References

- Format: `target_reference::method_name`

- Three kinds of method reference

  - Static method

  - Instance method of an arbitary type

  - Instance method of an existing object

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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`

Method References

Examples

Lambda	`(String s) -> Integer.parseInt(s);`
Method Ref	`Integer::parseInt`
Lambda	`(String s, int i) -> s.substring(i)`
Method Ref	`String::substring`
Lambda	`Axis a -> getLength(a)`
Method Ref	`this::getLength`
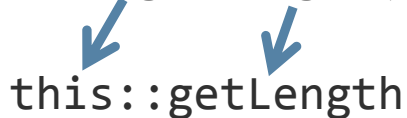
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Constructor References

- Same concept as a method reference
  - For the constructor

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

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

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

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