Generics

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Introduction

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Lecture topics

- Arrays as a simple generic data type
- Class generators: generics
- Interfaces and their implementation in the presence of generic parameters
- Generic collections library
- Generic lists
- Lambdas

Arrays as a simple generic data type

Arrays as a simple generic data type

Introduction

- A very common necessity when programming is storing multiple values in a variable
- There actually is a built-in datatype in most programming languages to do so
- This datatype is called **array**

Arrays as a simple generic data type

Introduction

- An array is declared with the type of the element, followed by square brackets
- The array is then initialized by specifying the number of elements it can store
- The elements are then inserted and removed given their position in the array

Arrays as a simple generic data type

An array is declared with the type of the element, followed by square brackets

```
1 int[] x;
```

Arrays as a simple generic data type

Which in Java then becomes:

```
1 int[] x;
```

Conclusion

Conclusion

Looking back

- Polymorphism makes it possible to pass different data types to other contexts, as long as the conversion is safe
- Inheritance is the basic mechanism of polymorphism
- Interfaces make this even more powerful by allowing the use of polymorphism without a concrete data type

This is it!

The best of luck, and thanks for the attention!