Script generated by TTT

Title: Lehmann: Uebung_Einf_HF (21.06.2013)

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Pages: 7

2 Language Basics – Variables

Reference Type Variables

- Reference type variables "point" to an object of the reference type

```
bike1 = new Bicycle();
bike2 = new Bicycle();


bike1.gear = 3;




boolean c;
c = bike1.equals(bike2);
    // c == false
c = (bike1 == bike2);
    // c == false
```

memory (simplified model)

cell nr	cell name	cell content
...	...	...
1149	bike1	<1150>
1150	bike1.cadence	0
1151	bike1.speed	0
1152	bike1.gear	3
...	...	...
1327	bike2	<1405>
...	...	...
1405	bike2.cadence	0
1406	bike2.speed	0
1407	bike2.gear	1
...	...	...

data

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2 Language Basics – Variables

Arrays

Indices: 0 1 2 3 4 5

length of example array is 6

first index

element at index 4

- Array: "Indexed list" of elements

- Holds a fixed number of variables of a certain type (primitive or reference)

- Is itself a reference type (see next slide)

```
int[] someArray;
someArray = new int[6];
someArray[0] = 23;
someArray[1] = 12;
someArray[5] = 4 + someArray[2];

String[] someOtherArray;
someOtherArray = new String[30];
someOtherArray[17] = "bla bla";

AnyClass[] thirdArray;
thirdArray = new AnyClass[45];
thirdArray[44] = new AnyClass();
thirdArray[22 * 2].someMethod();
```

array of *primitive type* elements

array of *reference type* elements (objects)