

Lecture 2IP65 & 2IP70

Week 8

ArrayList

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ArrayList

ArrayList: Growing and shrinking array

- *declaration*

```
ArrayList<String> a;
```

- *creation*

```
a = new ArrayList<String>();
```

- *appending*

```
a.add("aap");
```

- *insertion (elements after i are shifted)*

```
a.add(i, "jet");
```

- *change*

```
a.set(0, "AAP");
```

- *inspection*

```
s = a.get(0) + a.get(1);
```

- *deletion*

```
a.remove(i);
```

comparison to arrays

```
String[] a;
```

```
a = new String[...];
```

–

–

```
a[0] = "AAP";
```

```
a = a[0] + a[1];
```

–

ArrayList: more

- *visit all elements*

```
for (String s : a) {  
    ... s ...  
}
```

```
for (int i=0; i < a.length; i++) {  
    ... a[i] ...  
}
```

- *number of elements*

```
a.size()
```

```
a.length
```

- for primitive types (int, double, boolean, ...)

use **Integer**, **Double**, **Boolean**:

```
ArrayList<Integer> a;
```

```
a = new ArrayList<Integer>();
```