

# Java

Vocabulary, Data-structures, Types  
and Inheritance

# Vocabulary

Describe the following terms and how the two terms for each row relate to each other

Class	Object
Class	Interface
Method	Field
Scope	Variable
Type	Double
List	Array

# Class vs. Object

## Class

```
public class Bicycle {  
    ...  
}
```

## Object

```
Bicycle myBike = new Bicycle();
```

# Class vs. Interface

## Class

```
public class Bicycle {  
    public Bicycle() {}  
  
    public void ride(int meters) {  
        for (int i=0; i< meters; i++) {  
            self.pos += 1;  
        }  
    }  
}
```

## Interface

```
public interface Traveller {  
    public void ride(int meters);  
    public void drive(int meters);  
    public void fly(int meters);  
}
```

# Method vs. Field

## Field

```
public class Bicycle {  
    int wheelSize;  
    int pos;  
}
```

## Method

```
public class Bicycle {  
    public void ride(int meters) {  
        for (int i=0; i< meters; i++) {  
            self.pos += 1;  
        }  
    }  
}
```

# Scope vs. Variable

## Scope

```
{  
  int wheelSize = 0;  
}
```

## Variable

```
{  
  int wheelSize = 0;  
}
```

# Type vs. double

## Type

**double** a = 0.0;

**int** decVal = 26;

**boolean** result = true;

**char** capitalC = 'C';

**LinkedList<String>** linkedlist;

## Double

**double** b = 0.0;

# List vs. Array

## List

```
LinkedList l = new  
LinkedList<Integer>();  
l.add(1);  
l.add(1);  
...  
int e = l.get(7);
```

## Array

```
int[] a = new int[10];  
a[7] = 1;
```



# Division

```
int completed = 2;
```

```
int total = 3;
```

```
System.out.println(completed/total);
```

# Which data-structure?

Zur Implementierung einer Applikation bei dem Patienten sich mit dem Handy fuer einen Termin beim Arzt registrieren koennen.

# Which data-structure?

Eine Method welche anhand der Legi-Nr Informationen ueber den zugehoerigen Studenten zurueckgibt.

# Which data-structure?

Zum speichern eines Kochrezepts.

Zum speichern welche Objekte man in einer Handtasche hat.

# Inheritance

DEMO