

Java interfaces

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Interfaces

- ▶ Java interfaces are a bit like classes

```
interface SomeInterface {  
    int getAge();  
    int getHeight();  
}
```

- ▶ Defines (0 or more) methods, but without giving the implementation (no code!)
- ▶ To use them, do:

```
class A implements SomeInterface {  
    ...  
}
```

- ▶ This means that you **MUST** define the methods `getAge`, `getHeight` in class `A`.

Interfaces

- ▶ Java Precisely, section “Interfaces”
- ▶ Read more about Java interfaces here: <http://docs.oracle.com/javase/tutorial/java/concepts/interface.html>

What is the point of interfaces?

Java has a “typing” system. This distinguishes e.g. a string from an int etc.

```
Person p = new Person("tom","ridge");  
print(p.first); // OK
```

```
Object o = new Person("tom","ridge");  
print(o.first); // error!
```

What is the point of interfaces?

Compare this

// version 1

```
class Student { ... } // has a getName() method
```

```
class Teacher { ... } // has a getName() method
```

```
Object[] arr = [...]; // all students and teachers
```

```
for(int i=0; i<arr.length; i++) {  
    print(arr[i].getName()); } // error!
```

with

```
1  // version 2
2  interface Namable { String getName(); }
3
4  class Student implements Namable { ... }
5
6  class Teacher implements Namable { ... }
7
8  Namable[] arr = [...]; // all students and teachers
9
10 for(int i=0; i<arr.length; i++) {
11     print(arr[i].getName()); } // OK!
```