

Casting (המרה)

- Sometimes it is desirable for a variable of one type to be considered as belonging to another in an operation
- We say the variable is *cast* to the new type
- Syntax: *(type)operation/variable*

1

Example – find what's wrong

```
int a = 10;
int b = 20;
System.out.println("average=" + (a+b)*(1/2));
```

2

Alternatives

```
int a = 10;
int b = 20;
System.out.println("average = " + (a+b) * ((double)1/2));
System.out.println("average = " + (a+b) * (1.0/2));
// will the following work?
System.out.println("average = " + (a+b) * (double) (1/2));
```

3

Implicit Cast

- Automatic conversion between data types
- Occurs when data types can not be compared as is

```
int x, y;
double d;
x = 3; y = 5;
d = x + y; // d gets 8.0000
```

4

Implicit Cast (Cont.)

```
int a = 4.5; // implicit cast from double (4.5) to int (4),
             compilation error
```

```
double x = 4; // implicit cast from int to double, "int is a
              double" relation hold
```

5