

# Java Variables – double Datatype



The double datatype ranges from  $4.9e-324$  to  $1.7e+308$

It can be defined and initialised with or without the 'D' ...

```
8      double value = 12.45D;  
9  
10     double value1 = 9.982309283;
```

# Java Variables – Compatibility between Primitive Datatypes



In some cases a Developer may wish to move a value from one datatype to another, for example a byte to a double (but not vice versa) ...

```
8      byte byte1 = 12;  
9  
10     double double2 = byte1;
```

```
10     Type mismatch: cannot convert from double to byte  
11     byte byte2 = double1;
```

# Java Variables – Casting between Primitive Datatypes



To get round this problem the Developer can use the 'casting' technique, this is a physical instruction to the compiler to convert the data to the receiving datatype, in the previous example, moving a value from the double to the byte the Developer 'casts' the double on the right hand side to a 'byte', note the brackets ...

```
8      double double1 = 12.3;
9
10     byte byte2 = (byte) double1;
```