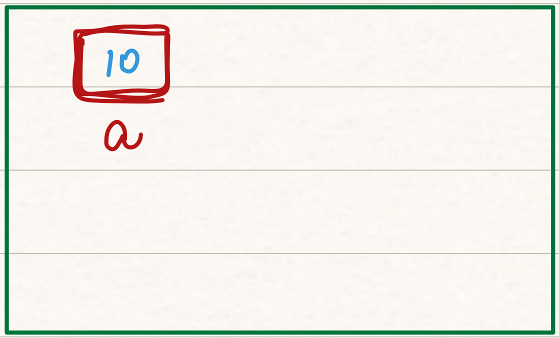
```
int a = 10 ;
```

data type

name of variable



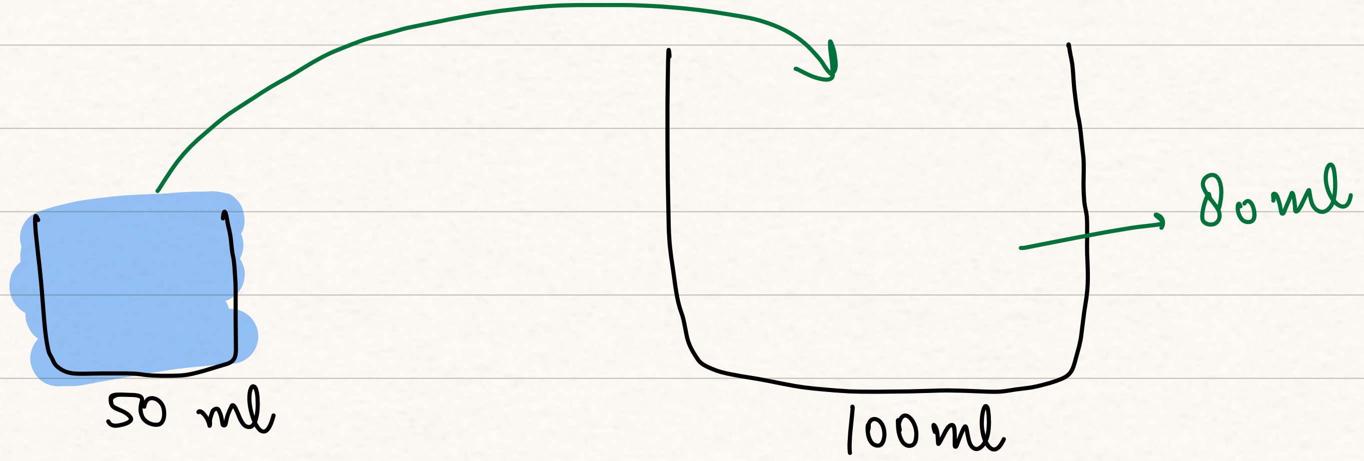
change the value to 50

```
int a = 50 ;   // Error

a = 50 ;
```

	Data types	Memory	Range
number	int	4 bytes	-10^9 to 10^9
	long	8 bytes	-10^{18} to 10^{18}
decimal number	float	4 bytes	
	double (more precision)	8 bytes	

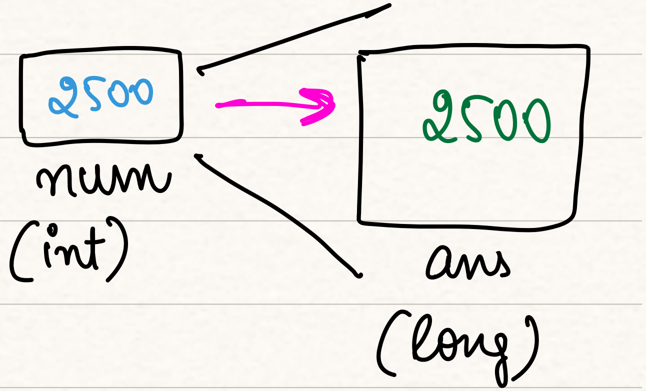
more digits after decimal point



Type casting

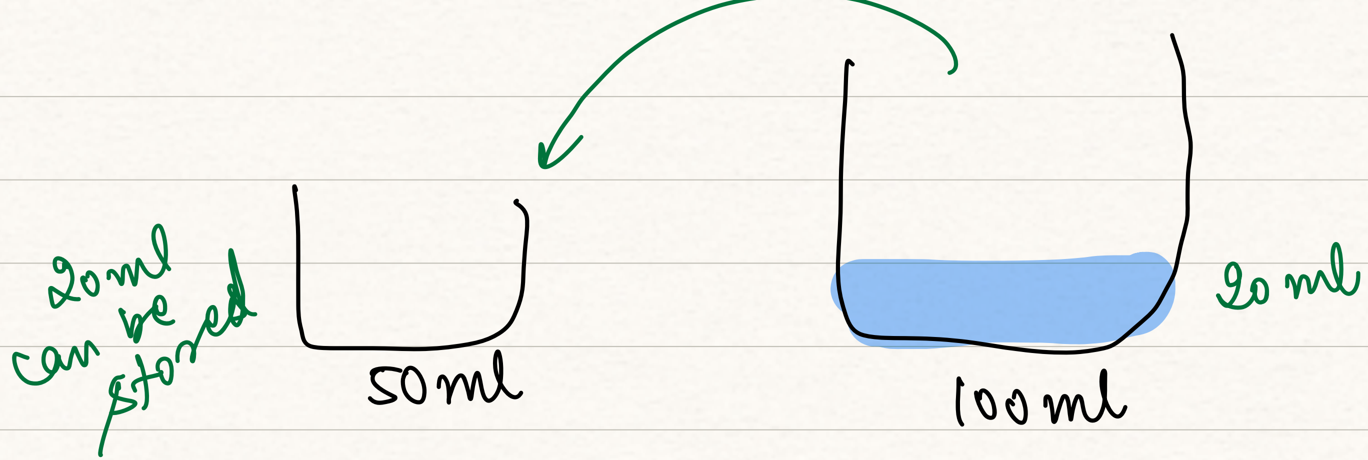
```
int num = 2500;
long ans = num;
System.out.print(ans);
```

Output → 2500

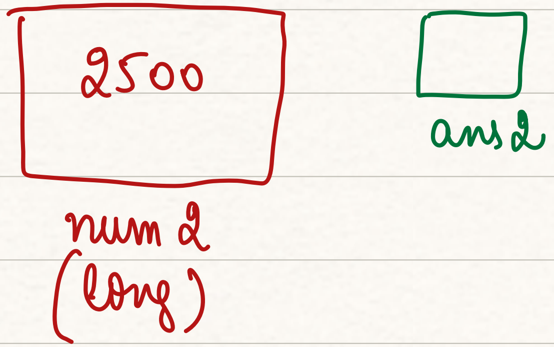


Widening type conversion [automatically]
(Implicit typecasting)

trying to store smaller data-type value into larger size container



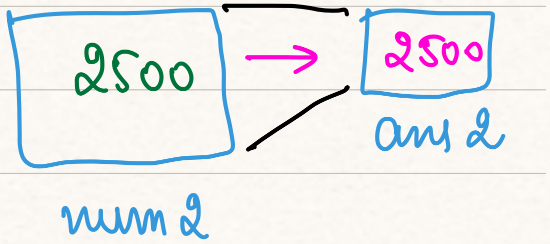
→
```
long num2 = 2500l;
int ans2 = num2;
System.out.print(ans2);
```



Error

[lossy conversion from long to int]

```
long num2 = 2500 l;
int ans 2 = (int) num 2;
System.out.print (ans 2);
```



Output → 2500

Narrowing type conversion forcefully

[Explicit type]

trying to store larger data type value into smaller container

Is Java is a case-sensitive language? → true

boolean → true / false

```
boolean ans = true;
System.out.print(ans);
```

→ true

Taking input from user

write (import java.util.*;) at the very first line

create scanner

```
Scanner scn = new Scanner(System.in);
```

```
int     →  scn.nextInt();
Long    →  scn.nextLong();
float   →  scn.nextFloat();
Double  →  scn.nextDouble();
Boolean →  scn.nextBoolean();
```

String → (text messages)

```
scn.next( );    // take input till space
                   is encountered

scn.nextLine();  // take the whole line
                    as input
```