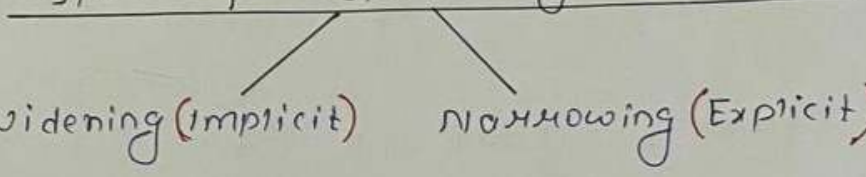
Type Casting in Java

Definition: Typecasting ka matlab hota hai ek datatype ke variable ko doosre data type me convert karna.

Types of Typecasting in Java.



(i) Widening Type Casting (Implicit)

Jab hum chhoti size ke type ko badi size ke type me convert karte hain. Java automatically kar deta hai, Data ka loss nahi hota hai.

Order of data type (smaller to bigger).

byte < short < int < long < float < double

ex:-
```
int a = 10
double b = a // automatic typecasting (int to double).
```

(ii) Narrowing Typecasting (Explicit)

Jab hum bade type ko chhote type me convert karte hain.

Jave me isse liye manually cast karna padta hai, kyunki data lost ho sakta hai.

ex:-
```
double a = 9.78;
int b = (int) a; // Explicit Casting
System.out.println(b); // output : 9 (0.78 lost)
```

Special Type Casting.

(i) char → int (widening, Implicit Casting)

Java automatically char ko int me convert kar deta hai, kyunki char ka value internally Unicode number (asci value) hota hai.

example: char ch = 'A';

int num = ch;

System.out.println(num); // output: 65

(ii) int → char (Narrowing, Explicit or Implicit if safe)

Jab int ko char me convert karte hain to JVM Unicode table ke according character return karta hai.

ex:- int num = 66;

char ch = (char) num;

System.out.println(ch); // output: B.

66 ka Unicode character 'B' hota hai, to conversion successful hai.

NOTE: Agar int value 0 - 65535 ke range me hai, to cast safe hai.

ex:- int num = 70000;

char ch = (char) num;

System.out.println(ch); // output: weird character

Yaha 70000 char ke valid range (0-65535) se bahar hai, to result unexpected hoga.