

2e - Type Conversion

Thursday, 6 August 2026 01:57

Hierarchy:

- i) long double
- ii) double
- iii) float
- iv) unsigned long int
- v) long int
- vi) unsigned int
- vii) int
- viii) short / char

Implicit Conversion

happens when a lower data type is used in calculation with higher data type.

eg: int value 1 = 10, int value 2 = 3;

float result;

result = value 1 / value 2;

printf("1. f", result); → o/p: 3.00

Why not 3.33

Value 1 & value 2 are int

So value 1 / value 2 is an int
 $10/3 = 3$ (int)

then 3 is assigned to a float.

So o/p $\Rightarrow 3.00$

If a or b is float, then the int (lower order) gets converted to float (higher order).

```
int a = 10;  
float b = 3;  
float result;
```

```
result = a/b;  
printf("%.1f", result);
```

$\longrightarrow$ a will implicitly become float
 $\hookrightarrow$ o/p $\Rightarrow 3.333$

```
int x = 10;  
float y = 3;  
float result;
```

```
result = (float)x/y;  
printf("%.1f", result);
```

$\longrightarrow$ explicitly mentioned as float
 $\hookrightarrow$ o/p: 3.33

Q what will be output? [GATE PYQ]

```
int main() {
```

```
    unsigned int a = 1000;  
    int b = -1;
```

```
    if (a > b) printf ("a is Big");  
    else printf ("a is Small");
```

```
    return 0;
```

```
}
```

Output: a is Small

Since a is unsigned and b is in a equation with a, b is converted from lower order to higher order i.e. int to unsigned no.

Questions: