The "float" data type

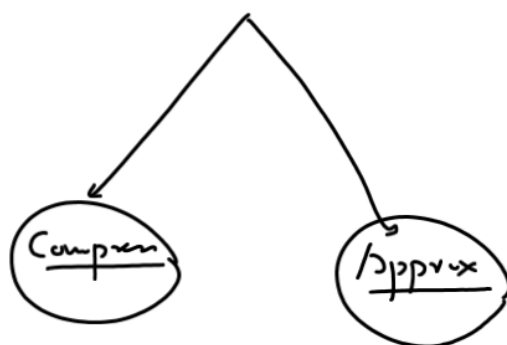| Data Type Name	Format Sp	Size	Range
① float	%f	4B	-3.4×10^{38} — 3.4×10^{38}
② double	%lf	8B	-1.7×10^{308} — 1.7×10^{308}
③ long double	%Lf	10B	-3.4×10^{4932} — 1.1×10^{4932}

unsigned
long int

4B

0 — $\boxed{4294967295}$

float

④B

-3.4×10^{38} — $\underline{3.4 \times 10^{38}}$

F. P. E.

(Flouting Point Emulate)

IEEE

```
       /\
      /  \
     /    \
    ↓      ↓
( Compress )  ( Approx )
```

float pxr;

56.5
↓
56.500000

56.8
↓
56.799999

45.4

45.400002

---

char ch;

ch = 'A';

printf(".%d", ch);
65

int n;

n = 65;

printf(".%c", n);
A

printf(".%f", n);

float x;

x = 65.0;

xprintf(".%d", x);

Example:
=======
1. char ch;
   ch='A';
   printf("%d",ch);

OUTPUT:
=======
65

2. int n;
   n=65;
   printf("%c",n);

OUTPUT:
=======
A

3. float x;
   x=65;
   printf("%d",x);

OUTPUT:
=======
0

These are
Sensible outputs

This is
absurd or
non-sense
output

Example:
=======
1. char ch;
   ch='A';
   printf("%f",ch);

OUTPUT:
=======
some absurd value

2. int n;
   n=65;
   printf("%f",n);

OUTPUT:
=======
some absurd value

Operators

- Arithmetic
- Relational
- Logical