Type Casting:
Converting one datatype into another is known as type casting.
implicit:

```c
void main()
{
int a=10,b=4;
float c;
c=a/b;
printf("%.2f",c);
}
```
output:2.00

Explicit:

```c
void main()
{
int a=10,b=4;
float c;
c=(float)a/b;
printf("%.2f",c);
}
```
output:2.50

Operator:

```c
void main()                      Arithmetic Operator: + - * / %
{
int a=10,b=3;
printf("%d",a/b);
printf("\n%d",a%b);
}
```
output:3
        1
```c
void main()
{
float a=10,b=4;
printf("%.2f",a/b);
printf("\n%f",a/b);
}
```
output:
2.50
2.500000

```c
void main()                      //Relational Operator: < > == <= >= !=
{
int a=10,b=5,c=6,d=7,e,f;
e=a>b;
f=c<d;
printf("%d\t%d",e,f);
}
```
output:
1 1

```c
void   main()
{
int a=45,b=23,c=56,d=56,e=9;
```

```
printf("%d%d%d%d",a!=b,c==d,e>b,c<=d);
}
ouput:
1101
```

```
void main()                    //logical opeartor: and(&&) or(||)   not(!)
{
int a=10,b=7,c=4,d=7,e,f;           A B A&&B        A B A||B        A !A
e=(a>b)&&(c<d);                      0 0 0           0 0 0           0  1
f=(a!=b)||(c==d);                    0 1 0           0 1 1        1  0
printf("%d%d",e,f);                  1 0 0           1 0 1
}                                     1 1 1           1 1 1
  output
11
```

```
void main()
{
int a=12,b=45,c=67,d,e,f;
d=!(a>b);
e=(a>b)&&(c<b);
f=(a==b)||(c>b);
printf("%d%d%d",d,e,f);
}
ouput:
101
```

```
void main()             //ternary operator or conditional operator   ?:
{
int a=20,b=7,c;
c=(a>b)?9:4;
printf("%d",c);
}
output:
9
```

```
void main()
{
int a=10,b=34,c;
c=(a<b)?((5>4)?6:7):9;
printf("%d",c);
}

output:
6
```

```
a+=3;                    //assignment operator =   +=   -= *= /=
equivalent to a=a+3;

a*=2;(correct)
is equivalent to a=a*2;
a=*2;(wrong)
```

<center>//Unary operator: ++ -- -</center>

```c
void main()
{
int a=5,b;
b=-a;
printf("%d",b);
}
output:-5
```

```
i++
++i
i=i+1;
i--
--i
i=i-1;
```

```c
void main()
{
int a=5;
printf("%d",a++);
printf("\t%d",++a);
}
output:
5 7
```

<center>// bitwise operator & | ^ << >></center>

```c
void main()
{
int a=12,b=7;                           a=1100
printf("%d\t%d\t%d",a&b,a|b,a^b);       b=0111
}
output:
8 15 11
```

```c
void main()
{
int a=37,b=8;                           a=100101
printf("%o %o %o",a&b,a|b,a^b);         b=001000
}
output:
0 55 55
```

```c
void main()
{
int a=10;
printf("%d\t%d",a<<2,a>>2);
}
output:
40 2
```

```
//sizeof()
```

```c
void main()
{
```

```
int a=5;
printf("%d %d",sizeof(a),size(float));
}
output:
4 4
```