Data Types in Java

Data types represent the different values to be stored in the variable. In java, there are two types of data types:

- Primitive data types
- Non-primitive data types

Data Type	Default Value	Default size
boolean	false	1 bit
char	'\u0000'	2 byte
byte	0	1 byte
short	0	2 byte
int	0	4 byte
long	0L	8 byte
float	0.0f	4 byte
double	0.0d	8 byte

Why char uses 2 byte in java and what is \u0000 ?

It is because java uses Unicode system than ASCII code system. The \u0000 is the lowest range of Unicode system. To get detail explanation about Unicode visit next page.

Java Variable Example: Add Two Numbers

```
1  class Simple{
2  public static void main(String[] args){
3  int a=10;
4  int b=10;
```

```
5    int c=a+b;
6    System.out.println(c);
7    }}
```

Output:

```
20
```

Java Variable Example: Widening

```
8    class Simple{
9    public static void main(String[] args){
10   int a=10;
11   float f=a;
12   System.out.println(a);
13   System.out.println(f);
14   }}
```

Output:

```
10
10.0
```

Java Variable Example: Narrowing (Typecasting)

```
15   class Simple{
16   public static void main(String[] args){
17   float f=10.5f;
18   //int a=f;//Compile time error
19   int a=(int)f;
20   System.out.println(f);
21   System.out.println(a);
22   }}
```

Output:

```
10.5
10
```

Java Variable Example: Overflow

```
23  class Simple{
24  public static void main(String[] args){
25  //Overflow
26  int a=130;
27  byte b=(byte)a;
28  System.out.println(a);
29  System.out.println(b);
30  }}
```

Output:

```
130
-126
```

Java Variable Example: Adding Lower Type

```
31  class Simple{
32  public static void main(String[] args){
33  byte a=10;
34  byte b=10;
35  //byte c=a+b;//Compile Time Error: because a+b=20 will be int
36  byte c=(byte)(a+b);
37  System.out.println(c);
38  }}
```

Output:

```
20
```