

## src\generics\_intro.ts

```
1  /* Generics in TypeScript allow you to create reusable components or functions that
   can work with multiple data types.
2
3  function logAndReturn(value: number | string): number | string | boolean {
4      console.log(value);
5      return value;
6  }
7
8  const numberResult = logAndReturn(42);
9  const stringResult = logAndReturn("Hello, Generics!");
10 const booleanResult = logAndReturn(true);
11
12 console.log(numberResult);
13 console.log(stringResult);
14 console.log(booleanResult);
15
16
17
18
19 // Generic function to log and return an input value
20 function logAndReturn<T>(value:T):T {
21     return value;
22 }
23
24 // Using the generic function with different types
25 const numberResult = logAndReturn<number>(42);
26 const stringResult = logAndReturn<string>("Hello, Generics!");
27 const booleanResult = logAndReturn<boolean>(true);
28
29 console.log(numberResult);
30 console.log(stringResult);
31 console.log(booleanResult);
32
33 //! HomeWork Time
34 //! Here is the function overloading Example? Which I will tell you in tomorrow video
35 function add(a: number, b: number): number;
36 function add(a: string, b: string): string;
37 function add(a: any, b: any): any {
38     return a + b;
39 }
40
41 const result1 = add(5, 10); // Output: 15
42 const result2 = add("Hello, ", "world!"); // Output: "Hello, world!"
43
44 //? You need to code the same using he Generics Types.
45
46
47
48
```