

## src\getter\_setter.ts

```
1  /* *****
2  /* GETTER & SETTER
3  /* *****
4
5  /** In TypeScript classes, you can use getter and setter methods to control the access
    and modification of class properties. Getter methods allow you to retrieve the value
    of a property, while setter methods allow you to set the value of a property with
    additional logic or validation.
6
7  //TODO The get method doesn't take any parameters, and the set method takes only one
    parameter.
8
9  class Persons {
10     private _age: number | undefined;
11     constructor(public name: string, protected hobbies: string[]) {}
12
13     public set age(age: number) {
14         if (age > 150 || age < 0) {
15             throw new Error("age is not valid");
16         }
17         this._age = age;
18     }
19
20     public get age() {
21         if (this._age === undefined) {
22             throw new Error("age is not defined");
23         }
24         return this._age;
25     }
26
27     introduceParent(): string {
28         return `Hi, I'm ${this.name} and I'm
29             ${this._age} years old. I love ${this.hobbies.join(",")}`;
30     }
31 }
32
33 const persons1: Persons = new Persons("vinod", ["reading", "painting"]);
34
35 // persons1.age(512);
36 persons1.age = 12;
37
38 console.log(persons1.introduceParent());
39 console.log(persons1.age);
40
41 /* PRACTICE TIME
42 /** Q1: Bank Account Balance
43 // Create a TypeScript class BankAccount with a private property _balance initialized
    to 0.
44 // Implement a getter method balance that returns the current balance.
45 // Implement a setter method balance that updates the balance if the new value is non-
    negative. Otherwise, log an error message.
46 // Instantiate an object of the BankAccount class.
47 // Use the setter to set the balance to 1000 and use the getter to display the updated
    balance.
```

```
48 // Try setting a negative balance using the setter. What output do you expect?
49
50 //? Q2: Temperature Converter
51 // Define a TypeScript class Temperature with a private property _celsius set to 0.
52 // Implement a getter method celsius that returns the temperature in Celsius.
53 // Implement a setter method celsius that sets the temperature in Celsius.
54 // Implement a getter method fahrenheit that converts Celsius to Fahrenheit using the
  formula  $(C * 9/5) + 32$ .
55 // Implement a setter method fahrenheit that converts Fahrenheit to Celsius using the
  formula  $(F - 32) * 5/9$ .
56 // Create an instance of the Temperature class.
57 // Use the setter to set the temperature in Celsius to 25 and then use the getter for
  Fahrenheit. What Fahrenheit value do you expect?
58 // Use the setter to set the temperature in Fahrenheit to 98.6 and then use the getter
  for Celsius. What Celsius value do you expect?
59
```