

EXP-3.3:

Person Class Hierarchy with Student and Teacher

Subclasses:

```
// Base class
class Person {
  constructor(name, age) {
    this.name = name;
    this.age = age;
  }

  introduce() {
    return `Hi, I'm ${this.name} and I'm ${this.age} years old.`;
  }
}

// Subclass: Student
class Student extends Person {
  constructor(name, age, grade) {
    super(name, age); // call parent constructor
    this.grade = grade;
  }

  study() {
    return `${this.name} is studying in grade ${this.grade}.`;
  }
}

// Subclass: Teacher
class Teacher extends Person {
  constructor(name, age, subject) {
    super(name, age);
    this.subject = subject;
  }

  teach() {
    return `${this.name} is teaching ${this.subject}.`;
  }
}

// Example usage
const student1 = new Student("Alice", 15, "10th");
const teacher1 = new Teacher("Mr. Smith", 40, "Mathematics");
```

```
console.log(student1.introduce()); // Hi, I'm Alice and I'm 15 years old.  
console.log(student1.study());    // Alice is studying in grade 10th.  
console.log(teacher1.introduce()); // Hi, I'm Mr. Smith and I'm 40 years old.  
console.log(teacher1.teach());    // Mr. Smith is teaching Mathematics.
```

OUTPUTS:



Person Class Hierarchy Example

Open the browser console (F12 → Console tab) to see the output.

```
student1: Hi, I'm Alice and I'm 15 years old.  
student1: Alice is studying in grade 10th.  
teacher1: Hi, I'm Mr. Smith and I'm 40 years old.  
teacher1: Mr. Smith is teaching Mathematics.
```