Experiment - 3.3

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Subject - Full Stack

Title

Person Class Hierarchy with Student and Teacher Subclasses

Objective

Understand and apply the concept of inheritance in JavaScript (ES6 classes) by creating a base class and extending it into specialized subclasses. This helps build strong foundational skills in object-oriented programming within a modern JavaScript context.

Code Implementation(Js) :

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

  displayInfo() {
    return `Name: ${this.name}, Age: ${this.age}`;
  }
}
```

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

  // Override/extend method
  displayInfo() {
    return `${super.displayInfo()}, Course: ${this.course}`;
  }
}

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

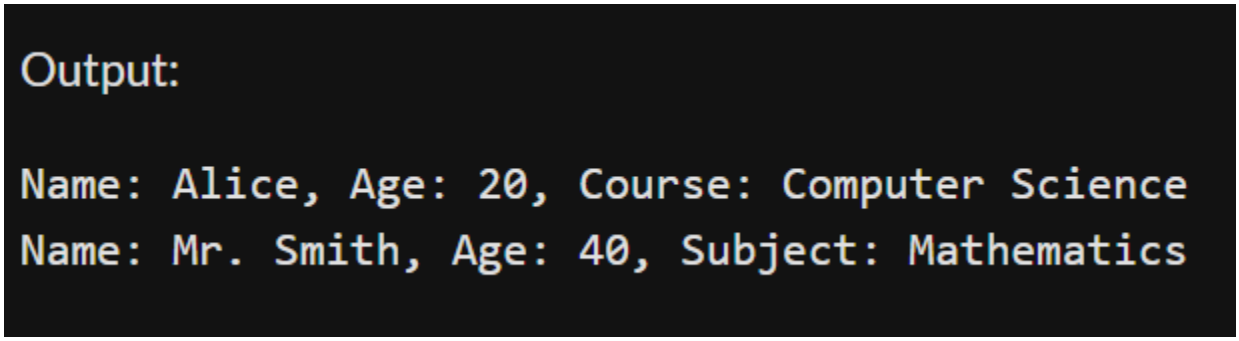
```
  // Override/extend method
  displayInfo() {
    return `${super.displayInfo()}, Subject: ${this.subject}`;
  }
}

// Creating instances
const student1 = new Student("Alice", 20, "Computer Science");
const teacher1 = new Teacher("Mr. Smith", 40, "Mathematics");

// Demonstrating method calls
console.log(student1.displayInfo());
// Output: Name: Alice, Age: 20, Course: Computer Science

console.log(teacher1.displayInfo());
// Output: Name: Mr. Smith, Age: 40, Subject: Mathematics
```

Output


Output:
Name: Alice, Age: 20, Course: Computer Science
Name: Mr. Smith, Age: 40, Subject: Mathematics