

Advanced JavaScript Part 2

Assignment Solution

Problem 1

```
function Person(name, age) {  
  this.name = name;  
  this.age = age;  
}  
Person.prototype.sayHello = function() {  
  console.log(`Hello, my name is ${this.name}`);  
};
```

Problem 2

```
function Employee(name, age, designation) {  
  Person.call(this, name, age);  
  this.designation = designation;  
}  
Employee.prototype = Object.create(Person.prototype);  
Employee.prototype.constructor = Employee;  
Employee.prototype.getDetails = function() {  
  console.log(`Name: ${this.name}, Age: ${this.age}, Designation: ${this.designation}`);  
};
```

Problem 3

```
function Calculator() {  
  this.value = 0;  
}  
Calculator.prototype.add = function(number) {  
  this.value += number;  
  return this;  
};  
Calculator.prototype.subtract = function(number) {  
  this.value -= number;  
  return this;  
};  
Calculator.prototype.multiply = function(number) {  
  this.value *= number;  
  return this;  
};  
Calculator.prototype.divide = function(number) {  
  if (number !== 0) {  
    this.value /= number;  
  }  
  return this;  
};
```

```
};
```

Problem 4

```
function Shape() {}
Shape.prototype.draw = function() {
    return "I am a generic shape";
};
function Circle() {}
Circle.prototype = Object.create(Shape.prototype);
Circle.prototype.constructor = Circle;
Circle.prototype.draw = function() {
    return "I am a circle";
};
function Rectangle() {}
Rectangle.prototype = Object.create(Shape.prototype);
Rectangle.prototype.constructor = Rectangle;
Rectangle.prototype.draw = function() {
    return "I am a rectangle";
};
```

Problem 5

```
if (!Array.prototype.customIncludes) {
    Array.prototype.customIncludes = function(searchElement,
fromIndex) {
        var startIndex = fromIndex || 0;
        for (var i = startIndex; i < this.length; i++) {
            if (this[i] === searchElement) {
                return true;
            }
        }
        return false;
    };
}
```