

Constructor with Validation

Write a Java program to create a class called Account with instance variables accountNumber and balance. Implement a parameterized constructor that initializes these variables with validation:

- accountNumber should be non-null and non-empty.
- balance should be non-negative.
- Print an error message if the validation fails.

Sample Solution:

Java Code:

Account.java

```
// Define the Account class
public class Account {
    // Private instance variables
    private String accountNumber;
    private double balance;

    // Parameterized constructor with validation
    public Account(String accountNumber, double balance) {
        // Validate accountNumber
        if (accountNumber == null || accountNumber.isEmpty()) {
            // Print error message if accountNumber is null or empty
            System.err.println("Error: Account number cannot be null or empty");
            return;
        }
        // Validate balance
        if (balance < 0) {
            // Print error message if balance is negative
            System.err.println("Error: Balance cannot be negative.");
            return;
        }
        // Initialize accountNumber with the provided parameter
        this.accountNumber = accountNumber;
        // Initialize balance with the provided parameter
        this.balance = balance;
    }
}
```

```
// Main method to test the Account class
public static void main(String[] args) {
    // Test with valid data
    Account account1 = new Account("12340009", 1000.00);
    System.out.println("Account 1 Number: " + account1.accountNumber);
    System.out.println("Account 1 Balance: " + account1.balance);

    // Test with invalid accountNumber
    Account account2 = new Account("", 400.00);

    // Test with invalid balance
    Account account3 = new Account("1230000873", -200.00);
}
}
```

Output:

```
Account 1 Number: 12340009
Account 1 Balance: 1000.0
Error: Account number cannot be null or empty.
Error: Balance cannot be negative.
```

Explanation: