

```
class BankAccount {  
    String accountNumber;  
    String customerName;  
    double balance;  
  
    static int accountCount = 0;  
    static double interestRate;  
  
    static {  
        interestRate = 4.5;  
        System.out.println("Static block: Initial interest rate set to " + interestRate);  
    }  
  
    BankAccount(String accountNumber, String customerName, double initialBalance) {  
        this.accountNumber = accountNumber;  
        this.customerName = customerName;  
        this.balance = initialBalance;  
        accountCount++;  
    }  
  
    void deposit(double amount) {  
        if (amount > 0) {  
            balance += amount;  
        } else {  
            System.out.println("Cannot deposit non-positive amount " + amount);  
        }  
    }  
  
    void withdraw(double amount) {  
        if (balance <= 0) {  
            System.out.println("Cannot withdraw non-positive amount " + amount);  
        } else if (amount > balance) {  
            System.out.println("Insufficient funds. Requested: " + amount + " Available: " + balance);  
        } else {  
            balance -= amount;  
        }  
    }  
  
    void addInterest(double years) {  
        if (years <= 0) {  
            System.out.println("No time passed. No interest.");  
            return;  
        }  
    }  
}
```

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        double r = interestRate / 100.0;
        balance += balance * r * years;
    }

    static void changeInterestRate(double newRate) {
        if (newRate < 0) {
            System.out.println("Interest rate cannot be negative: " + newRate);
        } else {
            interestRate = newRate;
        }
    }

    static int getAccountCount() {
        return accountCount;
    }

    static double getInterestRate() {
        return interestRate;
    }

    void displayDetails() {
        System.out.println("Account number: " + accountNumber
            + " Customer balance: " + balance
            + " Customer Name: " + customerName);
    }
}

class BankStatic {
    public static void main(String[] args) {
        System.out.println("Creating Bank Account: ");

        BankAccount acc1 = new BankAccount("ACC1001", "Ram", 1000.0);
        BankAccount acc2 = new BankAccount("ACC1002", "Sita", 2000.0);
        BankAccount acc3 = new BankAccount("ACC1003", "Laxman", 1500.0);

        System.out.println();
        System.out.println("Number of accounts created: " + BankAccount.getAccountCount());

        System.out.println("Initial Account Details: ");
        acc1.displayDetails();
        acc2.displayDetails();
        acc3.displayDetails();
    }
}

```

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        System.out.println("\nAdding interest based on interest rate = " +
BankAccount.getInterestRate());
        acc1.addInterest(0.5);
        acc2.addInterest(1.0);
        acc3.addInterest(1.5);
        System.out.println("Balances after interest: ");
        acc1.displayDetails();
        acc2.displayDetails();
        acc3.displayDetails();

BankAccount.changeInterestRate(5.5);
System.out.println("\nChanging Interest Rate to " + BankAccount.getInterestRate() + "%");

System.out.println("\nAdding interest again with the new rate:");
acc1.addInterest(0.5);
acc2.addInterest(1.0);
acc3.addInterest(1.5);

System.out.println("Final balances after interest with the new rate:");
acc1.displayDetails();
acc2.displayDetails();
acc3.displayDetails();
}

}

```

Output:

Creating Bank Account:

Static block: Initial interest rate set to 4.5

Number of accounts created: 3

Initial Account Details:

Account number: ACC1001 Customer balance: 1000.0 Customer Name: Ram

Account number: ACC1002 Customer balance: 2000.0 Customer Name: Sita

Account number: ACC1003 Customer balance: 1500.0 Customer Name: Laxman

Adding interest based on interest rate = 4.5

Balances after interest:

Account number: ACC1001 Customer balance: 1022.5 Customer Name: Ram

Account number: ACC1002 Customer balance: 2090.0 Customer Name: Sita

Account number: ACC1003 Customer balance: 1601.25 Customer Name: Laxman

Changing Interest Rate to 5.5%

Adding interest again with the new rate:

Final balances after interest with the new rate:

Account number: ACC1001 Customer balance: 1050.61875 Customer Name: Ram

Account number: ACC1002 Customer balance: 2204.95 Customer Name: Sita

Account number: ACC1003 Customer balance: 1733.353125 Customer Name: Laxman

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[Running] cd "c:\Users\bmsce\Desktop\CS206\" && javac BankStatic.java && java BankStatic

Creating Bank Account:

Static block: Initial interest rate set to 4.5

Number of accounts created: 3

Initial Account Details:

Account number: ACC1001 Customer balance: 1000.0 Customer Name: Ram

Account number: ACC1002 Customer balance: 2000.0 Customer Name: Sita

Account number: ACC1003 Customer balance: 1500.0 Customer Name: Laxman

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