#include <iostream>

#include <string>

using namespace std;

// Base class: AccountHolder

class AccountHolder {

protected:

    string name;

public:

    void setName(string n) {

        name = n;

    }

    string getName() {

        return name;

    }

};

// Derived class: BankAccount

class BankAccount : public AccountHolder {

private:

    int accountNumber;

    double balance;

public:

    BankAccount(string n, int accNum, double bal) : AccountHolder() {

        setName(n);

        accountNumber = accNum;

        balance = bal;

    }

    int getAccountNumber() {

        return accountNumber;

    }

    double getBalance() {

        return balance;

    }

};

// Derived class: SavingsAccount

class SavingsAccount : public BankAccount {

private:

    double interestRate;

public:

    SavingsAccount(string n, int accNum, double bal, double rate) : BankAccount(n, accNum, bal) {

        interestRate = rate;

    }

    double getInterestRate() {

        return interestRate;

    }

};

int main() {

    // Create a BankAccount object

    BankAccount account1("John Doe", 12345, 1000.0);

    cout << "Bank Account:" << endl;

    cout << "Name: " << account1.getName() << endl;

    cout << "Account Number: " << account1.getAccountNumber() << endl;

    cout << "Balance: $" << account1.getBalance() << endl;

    cout << endl;

    // Create a SavingsAccount object

    SavingsAccount savingsAccount1("Jane Smith", 67890, 5000.0, 2.5);

    cout << "Savings Account:" << endl;

    cout << "Name: " << savingsAccount1.getName() << endl;

    cout << "Account Number: " << savingsAccount1.getAccountNumber() << endl;

    cout << "Balance: $" << savingsAccount1.getBalance() << endl;

    cout << "Interest Rate: " << savingsAccount1.getInterestRate() << "%" << endl;

    return 0;

}