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// Description:

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/\*\* >>>>>>>>>>>>>>>>>>> CLASS BankAccount <<<<<<<<<<<<<<<<<<

\* A bank account has a balance that can be changed by

\* deposits and withdrawals.

\*/

**public** **class** BankAccount

{

**private** **double** balance; // instance variables are usually private

**private** **double** interestRate;

/\*\*

\* Constructor (0 parameters): Constructs a bank account with a zero

balance

\* >>> method overloading: more that 1 method with same name

\*/

**public** BankAccount()

{

balance = 0;

interestRate = 0;

}

/\*\*

\* Constructor (1 parameter): Constructs a bank account with a given

balance

\*/

**public** BankAccount(**double** givenBalance)

{

balance = givenBalance;

interestRate = 0;

}

/\*\*

\* Constructor (2 parameter): both the initial balance

\* and interest rate are set when a new account is created\*/

**public** BankAccount(**double** givenBalance, **double** givenRate)

{

balance = givenBalance;

interestRate = givenRate;

}

/\*\*

\* deposit - Method to deposit money into the bank account.

\* Adds the amount given to the account balance

\*/

**public** **void** deposit(**double** moneyAdded)

{

balance = balance + moneyAdded;

}

/\*\*

\* withdraw - Method to withdraw money from the bank account.

\* Subtracts the amount given from the account.

\*/

**public** **void** withdraw(**double** moneyTaken)

{

balance = balance - moneyTaken;

}

/\*\*

\* Gets the current balance of the bank account.

\*/

**public** **double** getBalance()

{

**return** balance;

}

/\*\*

\* closeAccount - sets the balance to zero and returns the amount of

\* money which was in the account before it closed

\*/

**public** **double** closeAccount()

{

**double** priorBalance;

priorBalance = balance;

balance = 0;

**return** priorBalance;

}

/\*\*

\* setInterestRate - takes a decimal value as a parameter and sets a

\* variable called interestRate to the value input.

\*/

**public** **void** setInterestRate(**double** newRate)

{

interestRate = newRate;

}

/\*\*

\* getInterestRate - returns the current interest rate as a decimal value

\*/

**public** **double** getInterestRate()

{

**return** interestRate;

}

/\*\*

\* addInterest - Method to add Interest to the account balance

\*/

**public** **void** addInterest()

{

balance+=(interestRate\*balance);

}

/\*\*

\* toString - Method to return instance variable data for chosen object

\*/

**public** String toString()

{

**return** "Interest Rate: "+interestRate+"\nBalance After Interest: "+balance;

}

}