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15035

Code :

```
//#ifndef SAVINGSACCOUNT_H
#define SAVINGSACCOUNT_H

class SavingsAccount
{
public:
    SavingsAccount( double, double );
    void setAnnualInterestRate( double );
    void getAnnualInterestRate();
    void calculateMonthlyInterest();
    static void modifyInterestRate( double );
    void print() const;

private:
    double savingsBalance;
    static double annualInterestRate;
};

#include <iostream>

#include <iomanip>
```

```
using namespace std;
```

```
#include "SavingsAccount.h"
```

```
double SavingAccount::annualIntrestRate = 0.0;
```

```
SavingAccount::SavingAccount(double balnce ,double air) {
```

```
    SavingsBalance = (balnce >= ? balnce : 0.0 );
```

```
    setAnnualInterestRate( air );
```

```
}
```

```
void SavingAccount::setAnnualInterestRate(double air){
```

```
    return annualIntrestRate;
```

```
}
```

```
void SavingAccount::calculateMonthlyInterest() {
```

```
    savingsBalance += savingsBalance * ( annualInterestRate / 12);
```

```
}
```

```
void SavingAccount::modifyInterestRate( double intrest ) {
```

```

        annualInterestRate = (interest >= 0.0 && interest <= 1.0) ? interest : .04;

    }

    void &SavingAccount::print() const {

        cout << fixed << setprecision(2) << "$" << savingsBalance;

    }

};

int main () {

    SavingAccount saver1;

    SavingAccount saver2;

    cout << "Balance For saver1 Is: " << saver1.print;

    cout << "\n Balance For saver2 Is: " << saver2.print << "\n\n";

    cout << "Interest Rate For Both Accounts is " << saver1.getAnnualInterestRate << "%";

    saver1.calculateMonthlyInterest();

    saver2.calculateMonthlyInterest();

```

```
cout << "Balance After 3% interest For saver1: " << saver1.print;
cout << "\nBalance After 3% interest For saver2: " << saver2.print;
cout << "\n\nSetting Annual Interest Rate to 4%";

saver1.modifyInterestRate( .04 );
saver2.modifyInterestRate( .04 );

saver1.calculateMonthlyInterest();
saver2.calculateMonthlyInterest();

cout << "\nBalance After 4% Interest For saver1: " << saver1.print;
cout << "\nBalance After 4% Interest For saver2: " << saver2.print;
cout << endl;
return 0;

}
```

Screen shot :

SavingsAccount.h

savingAcc.cpp

```
1  //ifndef SAVINGSACCOUNT_H
2  //define SAVINGSACCOUNT_H
3  class SavingsAccount
4  {
5  public:
6      SavingsAccount( double, double );
7      void setAnnualInterestRate( double );
8      void getAnnualInterestRate();
9      void calculateMonthlyInterest();
10     static void modifyInterestRate( double );
11     void print() const;
12
13 private:
14     double savingsBalance;
15     static double annualInterestRate;
16 };
17
18
19
```

```
6  #include "SavingsAccount.h"
7
8  double SavingAccount::annualInterestRate = 0.0;
9
10 SavingAccount::SavingAccount(double balnce ,double air) {
11     SavingsBalance = (balnce >= ? balnce : 0.0 );
12     setAnnualInterestRate( air );
13 }
14
15 void SavingAccount::setAnnualInterestRate(double air){
16     return annualInterestRate;
17 }
18
19 void SavingAccount::calculateMonthlyInterest() {
20     savingsBalance += savingsBalance * ( annualInterestRate / 12);
21 }
22
23 void SavingAccount::modifyInterestRate( double interest ) {
24     annualInterestRate = (interest >= 0.0 && interest <= 1.0) ? interest : .04;
25 }
26
27 void &SavingAccount::print() const {
28     cout << fixed << setprecision(2) << "$" << savingsBalance;
29 }
30
31 };
32
33
34
35
36
37
38
39
40
```

```
int main () {  
  
    SavingAccount saver1;  
    SavingAccount saver2;  
  
    cout << "Balance For saver1 Is: " << saver1.print;  
    cout << "\n Balance For saver2 Is: " << saver2.print << "\n\n";  
    cout << "Interest Rate For Both Accounts is " << saver1.getAnnualInterestRate << "%";  
  
    saver1.calculateMonthlyInterest();  
    saver2.calculateMonthlyInterest();  
  
    cout << "Balance After 3% interest For saver1: " << saver1.print;  
    cout << "\nBalance After 3% interest For saver2: " << saver2.print;  
    cout << "\n\nSetting Annual Interest Rate to 4%";  
  
    saver1.modifyInterestRate( .04 );  
    saver2.modifyInterestRate( .04 );  
  
    saver1.calculateMonthlyInterest();  
    saver2.calculateMonthlyInterest();  
  
    cout << "\nBalance After 4% Interest For saver1: " << saver1.print;  
    cout << "\nBalance After 4% Interest For saver2: " << saver2.print;  
    cout << endl;  
    return 0;  
}
```
