**11.8**

**package** demo2;

**import** java.util.Scanner;

**public** **class** helloworld {

**public** **static** **void** main(String[] args) {

Account1.*setAnnualInterestRate*(5.5);

Account1 account=**new** Account1("George",1122,1000);

account.deposit(30);

account.deposit(40);

account.deposit(50);

account.withdraw(5);

account.withdraw(4);

account.withdraw(2);

System.***out***.println("账户姓名： "+account.getName());

System.***out***.println("年利率： "+Account1.*getAnnualInterestRate*());

System.***out***.println("余额： "+account.getBalance());

java.util.ArrayList<Transaction> list=account.getTransactions();

System.***out***.printf("%-30s%-14s%-14s%-15s\n","交易时间","交易类型","交易金额","账户余额");

**for**(**int** i=0;i<list.size();i++) {

Transaction transaction=(Transaction)(list.get(i));

System.***out***.printf("%-35s%-14s%-16s%-15s\n",transaction.getDate(),transaction.getType(),

transaction.getAmount(),transaction.getBalance());

}

}

}

**class** Account1{

**private** **int** id;

**private** String name;

**private** **double** balance;

**private** **static** **double** *annualInterestRate*;

**private** java.util.Date dateCreated;

**private** java.util.ArrayList<Transaction> transactions=**new** java.util.ArrayList<>();

**public** Account1() {

dateCreated=**new** java.util.Date();

}

**public** Account1(String name,**int** id,**double** balance) {

**this**.id=id;

**this**.name=name;

**this**.balance=balance;

dateCreated=**new** java.util.Date();

}

**public** **int** getId() {

**return** **this**.id;

}

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

**return** balance;

}

**public** java.util.ArrayList<Transaction>getTransactions(){

**return** transactions;

}

**public** String getName() {

**return** name;

}

**public** **static** **double** getAnnualInterestRate() {

**return** *annualInterestRate*;

}

**public** **void** setId(**int** id) {

**this**.id=id;

}

**public** **void** setBalance(**double** balance) {

**this**.balance=balance;

}

**public** **static** **void** setAnnualInterestRate(**double** annualInterestRate) {

Account1.*annualInterestRate*=annualInterestRate;

}

**public** java.util.Date getDateCreated(){

**return** dateCreated;

}

**public** **void** withdraw(**double** amount) {

balance-=amount;

transactions.add(**new** Transaction("取款",amount,balance,""));

}

**public** **void** deposit(**double** amount) {

balance+=amount;

transactions.add(**new** Transaction("存款",amount,balance,""));

}

}

**class** Transaction{

**private** java.util.Date date;

**private** String type;

**private** **double** amount;

**private** **double** balance;

**private** String description;

**public** Transaction(String type,**double** amount ,**double** balance,String description) {

date =**new** java.util.Date();

**this**.type=type;

**this**.amount=amount;

**this**.balance=balance;

**this**.description=description;

}

**public** java.util.Date getDate(){

**return** date;

}

**public** String getType() {

**return** type;

}

**public** **double** getAmount() {

**return** amount;

}

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

**return** balance;

}

**public** String getDescription() {

**return** description;

}

}

11.16

**package** demo2;

**import** java.util.Scanner;

**import** java.util.\*;

**public** **class** helloworld {

**public** **static** **void** main(String[] args) {

**int** n1=(**int**)(Math.*random*()\*10);

**int** n2=(**int**)(Math.*random*()\*10);

Scanner input=**new** Scanner(System.***in***);

**int** []a=**new** **int**[1000];

**int** cnt=0;

System.***out***.print("What is "+n1+" + "+n2+"? ");

**int** ans =input.nextInt();

**while**(n1+n2!=ans) {

**int** flag=1;

**for**(**int** i=1;i<=cnt;i++) {

**if**(ans==a[i]) {

System.***out***.printf("You already entered %d\n",a[i]);

flag=0;

**break**;

}

}

**if**(flag==1) {

a[++cnt]=ans;

}

System.***out***.print("Wrong answer. Try again. What is "

+ n1 +" + "+n2+"? ");

ans=input.nextInt();

}

System.***out***.println("You got it!");

}

}

11.17

**package** demo2;

**import** java.util.Scanner;

**import** java.util.\*;

**public** **class** helloworld {

**public** **static** **void** main(String[] args) {

Scanner input=**new** Scanner(System.***in***);

System.***out***.println("enter n: ");

**int** n=input.nextInt();

**int** flag=n;

**int** i=2;

**int** m=1;

ArrayList<Integer> list=**new** ArrayList<Integer>();

ArrayList<Integer> list1=**new** ArrayList<Integer>();

**int** []a=**new** **int**[1000];

**while**(n!=1) {

**if**(n%i==0) {

list.add(i);

n=n/i;

a[i]++;

}

**else**

i++;

}

**for**(**int** j=0;j<1000;j++)

{

**if**(a[j]!=0&&(a[j]%2==1))

m=m\*j;

}

System.***out***.println(m);

System.***out***.println(m\*flag);

}

}

11.19

**package** demo2;

**import** java.util.Scanner;

**import** java.util.\*;

**public** **class** helloworld {

**public** **static** **void** main(String[] args) {

Scanner input=**new** Scanner(System.***in***);

System.***out***.println("Enter the number of objects: ");

**int** n=input.nextInt();

System.***out***.println("Enter the weights of objects: ");

**int** []a=**new** **int**[n];

**int** []vis=**new** **int**[n];

**for**(**int** i=0;i<n;i++) {

a[i]=input.nextInt();

vis[i]=0;

}

Arrays.*sort*(a);

**int** sum=0,cnt=0;

**while**(sum!=n) {

**int** now=10;

System.***out***.printf("Container %d contains objects with weight",++cnt);

**for**(**int** i=n-1;i>=0;i--) {

**if**(a[i]<=now&&vis[i]==0) {

vis[i]=1;

now-=a[i];

System.***out***.printf(" %d",a[i]);

sum++;

}

}

System.***out***.print("\n");

}

}

}