```java
 1 import java.util.Random;
 2 import java.util.Scanner;
 3
 4 /*Bank class maintains banks information.*/
 5 public class Bank
 6 {
 7     private String bankName;
 8     private int bankCode;
 9     Loan loanInfo;
10
11     /* constructor to create initial banks with names, codes, and loan information
   with annualInterestRate, and quote created date*/
12     Bank()
13     {
14         Random ranValue = new Random();
15         String bankNames[] = {"Wells Fargo","City Bank","Chase","Discovery","Terra
   Bank","PNC Financial Services","Capital One Financial"};
16         this.setBankName(bankNames[ranValue.nextInt(bankNames.length)]);
17         this.bankCode = 1+ranValue.nextInt(99);
18         loanInfo = new Loan();
19     }
20
21
22
23     /* constructor to create each matched banks with bank's names, bank's codes,
24      * and bank's loan information with bank's annualInterestRate, quote created
   date, user specified numbeOfYears, user specified loanAmount
25      * and prints the matched bank's bank name, bank code, AnnualInterestRate, loan
   amount, monthly payment, numberOfMonths, total payment, quote created date*/
26     Bank(Bank bank, double annualInterestRate,int  numberOfYears,double loanAmount,
   BankFinder c)
27     {
28         setBankName(bank.getBankName());
29         setBankCode(bank.getBankCode());
30         setLoanInfo(bank.getLoanInfo());
31         Loan l = getLoanInfo();
32         l.setNumberOfYears(numberOfYears);
33         l.setLoanAmount(loanAmount);
34
35         if (l.getAnnualInterestRate() ≤ annualInterestRate)
36         {
37             c.count++;
38             System.out.printf("|%-30s%10d%20.2f%20.2f%20.2f%20d%20.2f%30s|
   \n",getBankName(),getBankCode(),l.getAnnualInterestRate(),l.getLoanAmount
   (),l.getMonthlyPayment(),l.getNumberOfYears() * 12,l.getTotalPayment(),l.getLoanDate
   ().toString());
39         }
40
41
42     }
43
44
45     /*returns the total banks need to be checked*/
46     public static int howMany()
```

```java
47      {
48          Scanner input = new Scanner(System.in);
49          System.out.println("With how many banks you want to check: ");
50          return input.nextInt();
51      }
52
53
54      /*prints all banks with bank name, bank codes, bank annualInteresrtRate, and
   quote created date */
55      public static void printBanksCodes(Bank banks[])
56      {
57
58          int length = 30+10+20+30;
59          String spacer = "|"+"_".repeat(length)+"|";
60          System.out.println(spacer);
61          System.out.printf("|%-30s%10s%20s%30s|
   \n","Banks","Codes","AnnualInterestRate","Date");
62          System.out.println(spacer);
63          for (Bank b : banks) {
64              Loan l = b.getLoanInfo();
65              System.out.printf("|%-30s%10d%20.2f%30s|\n", b.getBankName(),
   b.getBankCode(), l.getAnnualInterestRate(), l.getLoanDate().toString());
66          }
67          System.out.println(spacer);
68      }
69
70      /*returns bankName */
71      public String getBankName() {
72          return bankName;
73      }
74
75      /*sets a new bankName*/
76      public void setBankName(String bankName) {
77          this.bankName = bankName;
78      }
79
80      /*returns bankCode */
81      public int getBankCode() {
82          return bankCode;
83      }
84
85      /*sets a new bankCode*/
86      public void setBankCode(int bankCode) {
87          this.bankCode = bankCode;
88      }
89
90      /*returns loanInfo */
91      public Loan getLoanInfo() {
92          return loanInfo;
93      }
94
95      /*sets a new loanInfo*/
96      public void setLoanInfo(Loan loanInfo) {
97          this.loanInfo = loanInfo;
```

```
98     }
99 }
```