

```
1 import java.util.Arrays;
2 import java.util.Scanner;
3 /*BankFinder class finds loan provider by collecting three pieces of information→
   loan amount, annual interest, and number of years to pay back in installments,
4 * prints the loan providers by sorting providers in alphabetical order or ascending
   order of annualInterestRate
5 * prints the loan providers whose annualInterestRate is less than or equal to the
   requested rate*/
6 public class BankFinder
7 {
8     /*counts the number of loan providers based on the criteria*/
9     int count;
10
11     /*Finds loan providers based on supplied information*/
12     public static void findLoanProvider()
13     {
14         BankFinder c = new BankFinder();
15         Scanner input = new Scanner(System.in);
16
17         Bank banks[] = new Bank[Bank.howMany()];
18         for(int i=0;i<banks.length;i++)
19         {
20             banks[i] = new Bank();
21         }
22
23         /*sort banks in alphabetical order based on bank names */
24         sortBank(banks,"names");
25         Bank.printBanksCodes(banks);
26
27         System.out.print("Enter annual interest rate within (1.00-10.00): ");
28         double annualInterestRate = input.nextDouble();
29
30
31         System.out.print("Enter number of years as an integer: ");
32         int numberOfYears = input.nextInt();
33
34         System.out.print("Enter loan amount, for example, 120000.95: ");
35         double loanAmount = input.nextDouble();
36
37         Bank matchedBanks[ ] = new Bank[banks.length];
38
39         /*sort banks in ascending order based on AnnualInterestRate */
40         sortBank(banks,0.0);
41
42         /*Display bank name, bank code, AnnualInterestRate, loan amount, monthly
   payment, numberOfMonths, total payment, quote created date*/
43         for(int i=1;i<173;i++)
44             System.out.print("_");
45         System.out.printf("\n|%-30s%10s%20s%20s%20s%20s%30s|
   \n","Banks","Codes","AnnualInterestRate","LoanAmount","monthlyPayment","numberOfMonth
   s","totalPayment","Date");
46         for(int i=1;i<175-2;i++)
47             System.out.print("_");
48         System.out.println();
```

```
49
50
51     /*find loan providers      */
52     for(int i=0;i<banks.length;i++)
53     {
54         matchedBanks[i] = findMatch(banks[i],annualInterestRate, numberOfYears,
loanAmount, c);
55     }
56     for(int i=1;i<175-2;i++)
57         System.out.print("_");
58     /*print total match found→count of loan providers*/
59     System.out.println("\n"+c.count+" Match found");
60
61
62
63 }
64
65
66     /* get each loan provider matches the criteria → AnnualInterestRate less than
or equal to user requested AnnualInterestRate */
67     public static Bank findMatch(Bank bank,double annualInterestRate, int
numberOfYears, double loanAmount, BankFinder c)
68     {
69         return new Bank(bank, annualInterestRate,  numberOfYears, loanAmount, c);
70     }
71
72     /*sort banks based on annualInterestRate*/
73     public static void sortBank(Bank b[],double typeValue)
74     {
75         Arrays.sort(b, (b1, b2) → Double.compare(b1.getLoanInfo
().getAnnualInterestRate(), b2.getLoanInfo().getAnnualInterestRate()));
76     }
77
78
79     /*sort banks based on bank names alphabetically*/
80     public static void sortBank(Bank b[],String typeValue)
81     {
82         Arrays.sort(b, (b1, b2) → b1.getBankName().compareTo(b2.getBankName()));
83     }
84 }
```