# Directions

1. Complete the following programs.
2. Screenshot the running programs. Include enough output to show the program works in its entirety.
3. Submit screenshots/copies of the code.
   1. Partial credit can be had if you made a valiant effort.
4. Submit to Brightspace.

Part 1: Complete Chapter 11 Programming Exercises starting on page 483; provide a snippet of the code and of enough output to show the program works in its entirety.

1. import java.io.\*;  
import java.nio.file.\*;  
import java.nio.file.attribute.\*;  
import java.util.\*;  
  
public class FileStatistics {  
 public static void main(String[] args) {  
 File f = new File("C:\\Object Files\\Question1.txt");  
 try {  
 BasicFileAttributes b = Files.*readAttributes*(f.toPath(), BasicFileAttributes.class);  
 System.out.println("The path is >>> " + f.getAbsolutePath());  
 System.out.println("The file name is >>> "+ f.getName());  
 System.out.println("The folder holding the file is >>> " + f.getParent());  
 System.out.println("The size of the file is >>> "+ b.size());  
 System.out.println("The file was last modified >>> "+ b.lastModifiedTime());  
 }  
 catch(IOException i)  
 {  
 System.out.println("IO Exception Caught");  
 }  
  
  
 }  
}

**Text

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4. import java.io.File;  
import java.io.FileWriter;  
import java.io.IOException;  
import java.sql.SQLOutput;  
import java.util.\*;  
  
public class WriteCustomerList {  
 public static void main(String[] args) {  
 Scanner sc = new Scanner(System.*in*);  
  
  
 try {  
 File f = new File("C:\\Object Files\\Question4.txt");  
 FileWriter fw = new FileWriter(f);  
  
 for(int x=0;x<3;x++) {  
 System.*out*.println("Enter the ID num");  
 int id = sc.nextInt();  
 sc.nextLine();  
  
 System.*out*.println("Enter First Name");  
 String fName = sc.nextLine();  
  
 System.*out*.println("Enter the last name");  
 String lName = sc.nextLine();  
  
 System.*out*.println("Enter the balance due");  
 double balance = sc.nextDouble();  
  
 String record = "ID: " + id + " " + fName + " " + lName + " Balance Due: " + balance;  
  
 fw.write(record + "\n");  
 }  
 fw.flush();  
 fw.close();  
  
 }  
 catch(IOException i)  
 {  
 System.*out*.println("IO Exception caught");  
 }  
  
 sc.close();  
 }  
}

b. import java.io.FileReader;  
import java.io.IOException;  
  
public class DisplaySavedCustomerList {  
 public static void main(String[] args) {  
 try {  
 FileReader fr = new FileReader("C:\\Object Files\\Question4.txt");  
 int i;  
 while ((i = fr.read()) != -1) {  
 System.*out*.print((char)(i));  
 }  
 fr.close();  
 fr.close();  
 }  
 catch(IOException i)  
 {  
 System.*out*.println(i.getMessage());  
 }  
  
 }  
}

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C. import java.io.File;  
import java.util.Scanner;  
  
public class DisplaySelectedCustomer {  
 public static void main(String[] args) {  
 try {  
 File f = new File("C:\\Object Files\\Question4.txt");  
 Scanner sc = new Scanner(System.*in*);  
 Scanner reader = new Scanner(f);  
 String line;  
 boolean check = false;  
  
 System.*out*.println("Enter the ID num to look for");  
 String num = sc.nextLine();  
  
  
 while(reader.hasNextLine())  
 {  
 line = reader.nextLine();  
 if(line.contains(num)) {  
 System.*out*.println(line);  
 check =true;  
 }  
 }  
  
 if(check == false)  
 {  
 System.*out*.println("No records of that ID Number");  
 }  
  
 sc.close();  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
 }  
}

Text

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D. import java.io.File;  
import java.util.Scanner;  
  
public class DisplaySelectedCustomerByName {  
 public static void main(String[] args) {  
 try {  
 File f = new File("C:\\Object Files\\Question4.txt");  
 Scanner sc = new Scanner(System.*in*);  
 Scanner reader = new Scanner(f);  
 String line;  
 boolean check = false;  
  
 System.*out*.println("Enter the Last Name to look for");  
 String lName = sc.nextLine();  
  
  
 while(reader.hasNextLine())  
 {  
 line = reader.nextLine();  
 if(line.contains(lName)) {  
 System.*out*.println(line);  
 check =true;  
 }  
 }  
  
 if(check == false)  
 {  
 System.*out*.println("No records of that Last Name");  
 }  
  
 sc.close();  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
 }  
}

Text

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E. import java.io.File;  
import java.util.Scanner;  
  
public class DisplaySelectedCustomerByBalance {  
 public static void main(String[] args) {  
 try {  
 File f = new File("C:\\Object Files\\Question4.txt");  
 Scanner sc = new Scanner(System.*in*);  
 Scanner reader = new Scanner(f);  
 String line;  
 boolean check = false;  
  
 System.*out*.println("Enter the Balance to look for");  
 String balance = sc.nextLine();  
  
 while(reader.hasNextLine())  
 {  
 line = reader.nextLine();  
 if(line.contains(balance)) {  
 System.*out*.println(line);  
 check =true;  
 }  
 }  
  
 if(check == false)  
 {  
 System.*out*.println("No records of that Last Name");  
 }  
  
 sc.close();  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
 }  
}

Text

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7. import java.io.File;  
import java.io.FileWriter;  
import java.util.Scanner;  
  
public class StudentStanding {  
 public static void main(String[] args) {  
  
 try{  
 File good = new File("C:\\Object Files\\Q7\_Good.txt");  
 File bad = new File("C:\\Object Files\\Q7\_Bad.txt");  
 FileWriter fGood = new FileWriter(good);  
 FileWriter fBad = new FileWriter(bad);  
  
 for(int x=0;x<4;x++) {  
  
 Scanner sc = new Scanner(System.*in*);  
  
 System.*out*.println("Enter the ID num");  
 int num = sc.nextInt();  
 sc.nextLine();  
  
 System.*out*.println("Enter the First Name");  
 String fName = sc.nextLine();  
  
 System.*out*.println("Enter the Last Name");  
 String lName = sc.nextLine();  
  
 System.*out*.println("Enter the GPA");  
 double gpa = sc.nextDouble();  
  
 String student = "ID Num >>> " + num + " Name >>> "+ fName + " " + lName + " GPA >>> " + gpa;  
  
 if(gpa>=2.0)  
 {  
 student+=(" Distance From 2.0 >>> " + (gpa-2.0) + "\n");  
 fGood.write(student);  
 }  
 else  
 {  
 student+=(" Distance From 2.0 >>> " + (2.0-gpa) + " \n");  
 fBad.write(student);  
 }  
 }  
  
 fGood.close();  
 fBad.close();  
  
 }  
 catch(Exception e )  
 {  
 System.*out*.println(e.getMessage());  
 }  
  
 }  
}

B. import java.io.File;  
import java.util.Scanner;  
  
public class StudentStanding2 {  
 public static void main(String[] args) {  
  
 try {  
 File good = new File("C:\\Object Files\\Q7\_Good.txt");  
 File bad = new File("C:\\Object Files\\Q7\_Bad.txt");  
 Scanner sG = new Scanner(good);  
 Scanner sB = new Scanner(bad);  
 String line;  
 double num;  
  
 System.*out*.println("Students above or equal to 2.0 GPA");  
 while(sG.hasNextLine()) {  
 line = sG.nextLine();  
 System.*out*.println(line);  
 }  
  
 System.*out*.println("\nStudents below 2.0 GPA");  
 while(sB.hasNextLine()) {  
 line = sB.nextLine();  
 System.*out*.println(line);  
 }  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
 }  
}

Text

Description automatically generated

8. import java.io.File;  
import java.io.FileWriter;  
import java.io.RandomAccessFile;  
import java.util.Scanner;  
  
public class CreateBankFile {  
 public static void main(String[] args) {  
 try {  
 File f = new File("C:\\Object Files\\Q8.txt");  
 RandomAccessFile bank = new RandomAccessFile(f,"rw");  
 Scanner sc = new Scanner(System.*in*);  
  
 //Adding the blank records  
  
 for (int x = 0; x < 1000; x++) {  
 bank.writeBytes("000 \*\*\*\*\*\*\*\* 0000.00\n");  
 }  
  
 //Getting Record Info  
  
 for(int x=0;x<3;x++) {  
 System.*out*.println("Enter the account number <Make sure it is three digits EX. 025");  
 String accountNum = sc.nextLine();  
  
 System.*out*.println("Enter the last name");  
 String name = sc.nextLine();  
  
 while (name.length() < 8) {  
 name += "\*";  
 }  
  
 System.*out*.println("Enter the balance - 7 digits total EX 90000.1 or 1000.01");  
 double balance = sc.nextDouble();  
 sc.nextLine();  
  
 String record = accountNum + " " + name + " " + balance + "\n";  
 System.*out*.println(record);  
  
 //Adding the record  
 bank.seek((Integer.*parseInt*(accountNum) - 1) \* 21);  
 bank.writeBytes(record);  
  
 bank.seek(0);  
 }  
 bank.close();  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
  
 }  
}

B. import java.io.File;  
import java.util.\*;  
  
public class ReadBankSequentially {  
 public static void main(String[] args) {  
  
 try{  
 File f = new File("C:\\Object Files\\Q8.txt");  
 Scanner reader = new Scanner(f);  
 ArrayList<String> nums = new ArrayList<String>();  
 String line;  
 int test1;  
 int test2;  
 int test3;  
  
 while(reader.hasNextLine())  
 {  
 line= reader.nextLine();  
 test1= Integer.*parseInt*(line.substring(0,1));  
 test2= Integer.*parseInt*(line.substring(1,2));  
 test3= Integer.*parseInt*(line.substring(2,3));  
  
 if(test1>0 || test2>0 || test3>0)  
 {  
 nums.add(line);  
 }  
 }  
  
 Collections.*sort*(nums);  
 System.*out*.println(nums);  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
 }  
}

Text

Description automatically generated

C. import java.io.File;  
import java.util.Scanner;  
  
public class ReadAccountBankRandomly {  
 public static void main(String[] args) {  
  
 try{  
 Scanner sc = new Scanner(System.*in*);  
 File file = new File("C:\\Object Files\\Q8.txt");  
 Scanner reader = new Scanner(file);  
 String str;  
 String line ="";  
 String info ="";  
 boolean check = false;  
  
 do{  
 System.*out*.println("Enter the id num to find the balance of");  
 str=sc.nextLine();  
  
 while(reader.hasNextLine())  
 {  
 line = reader.nextLine();  
 if(line.substring(0,3).equals(str))  
 {  
 info = line;  
 check =true;  
 }  
 }  
  
 if(!check)  
 {  
 info="No information on that ID Number";  
 }  
  
 System.*out*.println(info);  
 reader.close();  
 reader= new Scanner(file);  
 check =false;  
  
 }while(!str.equals("9999"));  
  
 reader.close();  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
 }  
}

Text

Description automatically generated

9. import java.io.File;  
import java.io.RandomAccessFile;  
import java.util.Scanner;  
  
public class CreateCustomerFile {  
 public static void main(String[] args) {  
  
 try {  
 File f = new File("C:\\Object Files\\Q9.txt");  
 RandomAccessFile file = new RandomAccessFile(f,"rw");  
 Scanner sc = new Scanner(System.*in*);  
 boolean check = true;  
  
 for(int x=0;x<20;x++)  
 {  
 file.writeBytes("\*\*\* \*\*\*\*\*\* \*\*\*\*\*\n");  
 }  
  
  
 for(int y=0;y<3;y++) {  
 //Id num  
 System.*out*.println("Enter the 3 digit ID Number");  
 String id = sc.nextLine();  
  
 //Name  
 System.*out*.println("Enter the last name");  
 String name = sc.nextLine();  
  
 if(name.length() > 6) {  
 System.*out*.println("Error >>> Last Name greater than 6 letters");  
 name = name.substring(0, 6);  
 } else {  
 for (int x = name.length(); x < 6; x++) {  
 name += "\*";  
 }  
 }  
  
 //Zip  
  
 System.*out*.println("Enter the 5 digit zip code");  
 String zip = sc.nextLine();  
  
 String record = id + " " + name + " " + zip + "\n";  
 System.*out*.println(record);  
  
 while(file.getFilePointer() < file.length())  
 {  
 if(file.readLine().substring(0,3).contains(id))  
 {  
 check = false;  
 System.*out*.println("testing");  
 }  
  
 }  
  
 if(check) {  
 file.seek((Integer.*parseInt*(id) - 1) \* 17);  
 file.writeBytes(record);  
 }  
 else {  
 System.*out*.println("Cannot enter the customer the Id num already is in the list");  
 }  
  
 check=true;  
 file.seek(0);  
  
 }  
 file.close();  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
  
 }  
}

B. import java.io.File;  
import java.io.RandomAccessFile;  
import java.util.Scanner;  
  
public class CreateItemFile {  
 public static void main(String[] args) {  
 try {  
 File f = new File("C:\\Object Files\\Q9\_2.txt");  
 RandomAccessFile file = new RandomAccessFile(f,"rw");  
 Scanner sc = new Scanner(System.*in*);  
 boolean check = true;  
  
 for(int x=0;x<20;x++)  
 {  
 file.writeBytes("\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  
 }  
  
  
 for(int y=0;y<3;y++) {  
 //Id num  
 System.*out*.println("Enter the 3 digit ID Number");  
 String id = sc.nextLine();  
  
 //Dec  
 System.*out*.println("Enter the decription");  
 String dec = sc.nextLine();  
  
 if(dec.length() > 20) {  
 System.*out*.println("Error >>> Last Name greater than 6 letters");  
 dec = dec.substring(0, 20);  
 } else {  
 for (int x = dec.length(); x < 20; x++) {  
 dec += "\*";  
 }  
 }  
  
 String record = id + " " + dec + "\n";  
 System.*out*.println(record);  
  
 while(file.getFilePointer() < file.length())  
 {  
 if(file.readLine().substring(0,3).contains(id))  
 {  
 check = false;  
 System.*out*.println("testing");  
 }  
 }  
  
 if(check) {  
 file.seek((Integer.*parseInt*(id) - 1) \* 25);  
 file.writeBytes(record);  
 }  
 else {  
 System.*out*.println("Cannot enter the item the Id num already is in the list");  
 }  
  
 check=true;  
 file.seek(0);  
  
 }  
 file.close();  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
 }  
}

C. import java.io.File;  
import java.io.FileReader;  
import java.util.Scanner;  
  
public class CustomerItemOrder {  
 public static void main(String[] args) {  
 try{  
 Scanner sc = new Scanner(System.*in*);  
 File customer = new File("C:\\Object Files\\Q9.txt");  
 File items = new File("C:\\Object Files\\Q9\_2.txt");  
 Scanner c = new Scanner(customer);  
 Scanner i = new Scanner(items);  
 String line;  
 String customerInfo ="";  
 String itemInfo ="";  
 boolean check =false;  
 boolean check2 = false;  
  
 //Customer  
  
 System.*out*.println("Enter your customer number");  
 String cNum = sc.nextLine();  
  
 while(c.hasNextLine())  
 {  
 line = c.nextLine();  
 if(line.substring(0,3).contains(cNum))  
 {  
 customerInfo=line;  
 check = true;  
 }  
 }  
  
 if(!check)  
 {  
 System.*out*.println("Could not find Customer Num on file");  
 }  
  
 //Item  
  
 System.*out*.println("Enter your item number");  
 String iNum = sc.nextLine();  
  
 while(i.hasNextLine())  
 {  
 line = i.nextLine();  
 if(line.substring(0,3).contains(iNum))  
 {  
 itemInfo=line;  
 check2=true;  
 }  
 }  
  
 if(!check2)  
 {  
 System.*out*.println("Could not find Item Num on file");  
 }  
  
 //Display Info  
  
 if(check && check2)  
 {  
 System.*out*.println(customerInfo);  
 System.*out*.println(itemInfo);  
 }  
 else{  
 System.*out*.println("Invalid Entry");  
 }  
  
 sc.close();  
 c.close();  
 i.close();  
  
  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
  
 }  
}

import java.io.File;  
import java.nio.file.Files;  
import java.nio.file.Paths;  
import java.util.Scanner;  
  
public class SecretPhraseUsingFile {  
 public static void main(String[] args) {  
 try{  
  
 File file = new File("C:\\Object Files\\GZ.txt");  
 Scanner reader = new Scanner(file);  
 Scanner sc = new Scanner(System.*in*);  
 StringBuilder guess = new StringBuilder("");  
 String g = "";  
  
 int num = (int)(Math.*random*()\*10)+1;  
 String line = Files.*readAllLines*(Paths.*get*("C:\\Object Files\\GZ.txt")).get(num);  
 StringBuilder answer = new StringBuilder(line);  
  
 for(int x=0;x<line.length();x++)  
 {  
 guess.append("\*");  
 }  
  
 do{  
 System.*out*.println(guess);  
  
 System.*out*.println("Enter your letter guess");  
 g = sc.nextLine();  
  
 for(int x=0;x<guess.length();x++)  
 {  
 if(g.equals(answer.substring(x,x+1)))  
 {  
 guess=guess.replace(x,x+1,g);  
 }  
 }  
  
 }while(!guess.toString().equalsIgnoreCase(answer.toString()));  
  
 System.*out*.println("You Win!!!");  
  
 reader.close();  
  
 }  
 catch(Exception e)  
 {  
 System.*out*.println(e.getMessage());  
 }  
 }  
}

Text

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