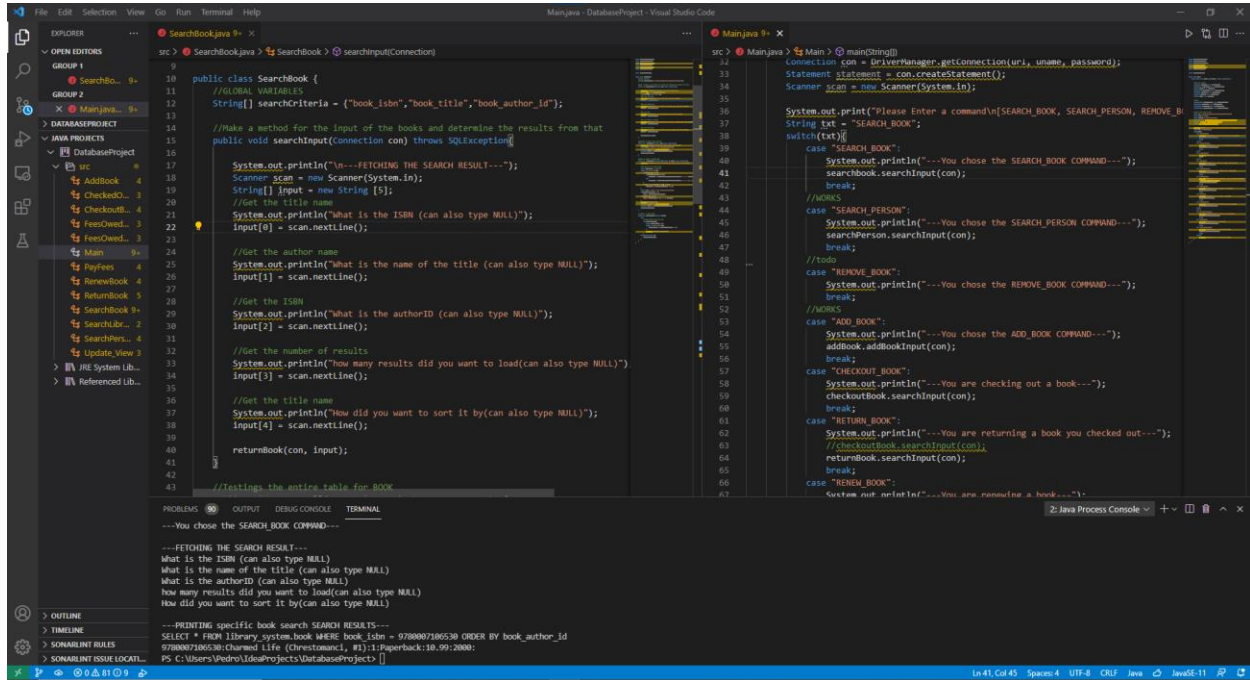


Database Library Project

The commands are in bold, and for every command a set of instructions will be printed out to help use the system and understand it.

SEARCH_BOOK – you can input either the author_id, title, or ISBN to find a specific title



```
src > SearchBook.java 9+ SearchBook > searchInput(Connection)
9
10 public class SearchBook {
11     //Global variables
12     String[] searchCriteria = {"book_isbn", "book_title", "book_author_id"};
13
14     //Make a method for the input of the books and determine the results from that
15     public void searchInput(Connection con) throws SQLException {
16
17         System.out.println("\n---FETCHING THE SEARCH RESULT---");
18         Scanner scan = new Scanner(System.in);
19         String[] input = new String [5];
20         //Get the title name
21         System.out.println("What is the ISBN (can also type NULL)");
22         input[0] = scan.nextline();
23
24         //Get the author name
25         System.out.println("What is the name of the title (can also type NULL)");
26         input[1] = scan.nextline();
27
28         //Get the ISBN
29         System.out.println("What is the authorID (can also type NULL)");
30         input[2] = scan.nextline();
31
32         //Get the number of results
33         System.out.println("How many results did you want to load(can also type NULL)");
34         input[3] = scan.nextline();
35
36         //Get the title name
37         System.out.println("How did you want to sort it by(can also type NULL)");
38         input[4] = scan.nextline();
39
40         returnBook(con, input);
41
42         //Testing the entire Table for BOOK
43     }
44 }
45
46 src > Main.java 9+ Main > main(String[])
47
48 Connection con = DriverManager.getConnection(uri, uname, password);
49 Statement statement = con.createStatement();
50 Scanner scan = new Scanner(System.in);
51
52 System.out.print("Please Enter a command\n[SEARCH_BOOK, SEARCH_PERSON, REMOVE_B
53 String str = "SEARCH_BOOK";
54 switch(str){
55     case "SEARCH_BOOK":
56         System.out.println("---You chose the SEARCH_BOOK COMMAND---");
57         searchbook.searchInput(con);
58         break;
59     //WORKS
60     case "SEARCH_PERSON":
61         System.out.println("---You chose the SEARCH_PERSON COMMAND---");
62         searchPerson.searchInput(con);
63         break;
64     //todo
65     case "REMOVE_BOOK":
66         System.out.println("---You chose the REMOVE_BOOK COMMAND---");
67         searchbook.searchInput(con);
68         break;
69     //WORKS
70     case "ADD_BOOK":
71         System.out.println("---You chose the ADD_BOOK COMMAND---");
72         addBook.addBookInput(con);
73         break;
74     case "CHECKOUT_BOOK":
75         System.out.println("---You are checking out a book---");
76         checkoutBook.searchInput(con);
77         break;
78     case "RETURN_BOOK":
79         System.out.println("---You are returning a book you checked out---");
80         //checkoutBook.searchInput(con);
81         returnBook.searchInput(con);
82         break;
83     case "RENEW_BOOK":
84         System.out.println("---You are renewing a book---");
85         returnBook.searchInput(con);
86         break;
87 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

---You chose the SEARCH_BOOK COMMAND---

---FETCHING THE SEARCH RESULT---

What is the ISBN (can also type NULL)

What is the name of the title (can also type NULL)

What is the authorID (can also type NULL)

How many results did you want to load(can also type NULL)

How did you want to sort it by(can also type NULL)

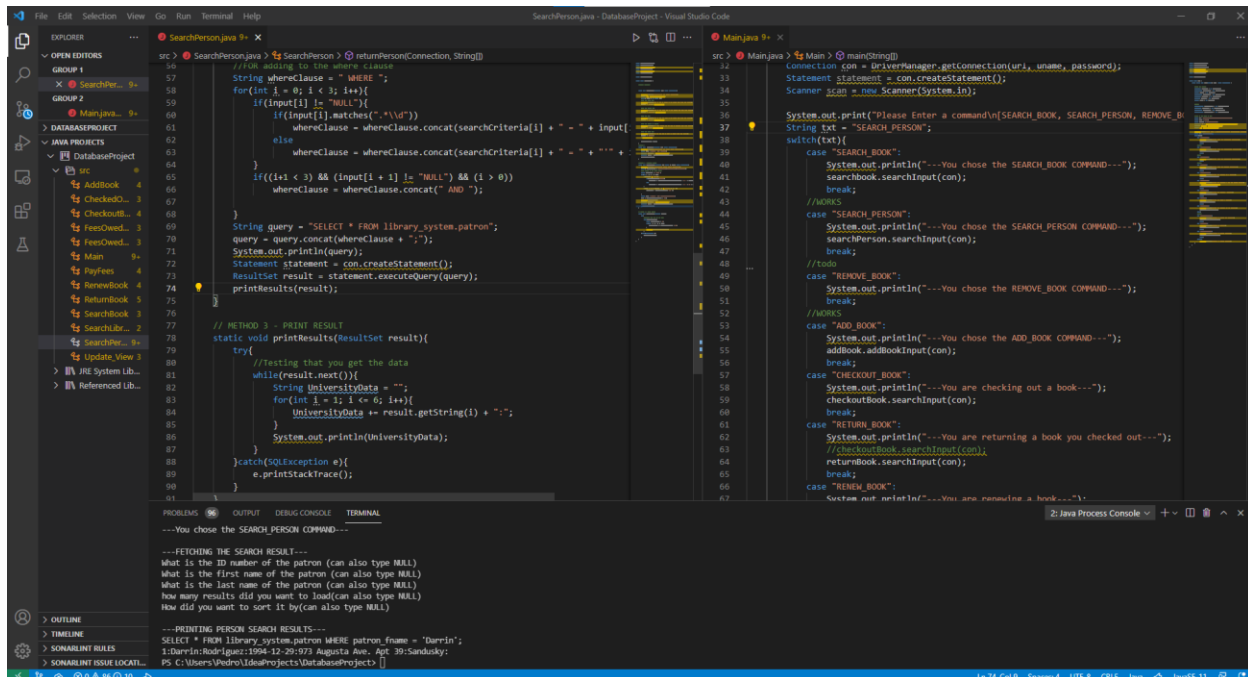
---PRINTING specific book search RESULTS---

SELECT * FROM library.system.book WHERE book_isbn = 0788007186038 ORDER BY book_author_id

0788007186038:Chained Life (Christina: #1):Paperback:18.99:2000:

PS C:\Users\Pedro\IdeaProjects\DatabaseProject>

Search_Person – you can look up a person using their patron_id number. First name or last name



```
src > SearchPerson.java > SearchPerson > returnPerson(Connection,StringID)
56 //FOR adding to the where clause
57 String whereClause = " WHERE ";
58 for(int i = 0; i < 3; i++){
59     if(input[i] != "NULL"){
60         if(input[i].matches(".*\\d")){
61             whereClause = whereClause.concat(searchCriteria[i] + " - " + input[i] + " AND ";
62         }
63         else
64             whereClause = whereClause.concat(searchCriteria[i] + " - " + " " + " AND ";
65     }
66     if(((i+1 < 3) && (input[i+1] != "NULL") && (i > 0))
67         whereClause = whereClause.concat(" AND ");
68 }
69 String query = "SELECT * FROM library.system.patron";
70 query = query.concat(whereClause + ";");
71 System.out.println(query);
72 Statement statement = con.createStatement();
73 ResultSet result = statement.executeQuery(query);
74 printResults(result);
75 }
76 // METHOD 3 - PRINT RESULT
77 static void printResults(ResultSet result){
78     try{
79         //Testing that you get the data
80         while(result.next()){
81             String UniversityData = "";
82             for(int i = 1; i <= 6; i++){
83                 UniversityData += result.getString(i) + " ";
84             }
85             System.out.println(UniversityData);
86         }
87     }catch(SQLException e){
88         e.printStackTrace();
89     }
90 }
91 }

Main.java > Main > main(String[])
32 Connection con = DriverManager.getConnection(uri, uname, password);
33 Statement statement = con.createStatement();
34 Scanner scan = new Scanner(System.in);
35
36 System.out.println("Please Enter a command\nSEARCH_BOOK, SEARCH_PERSON, REMOVE_BOOK, ADD_BOOK, CHECKOUT_BOOK, RETURN_BOOK, RENEW_BOOK, PAY_FEE");
37 String txt = "SEARCH_PERSON";
38 switch(txt){
39     case "SEARCH_BOOK":
40         System.out.println("You chose the SEARCH_BOOK COMMAND---");
41         searchbook.searchInput(con);
42         break;
43     //REMOVE_PERSON:
44     case "SEARCH_PERSON":
45         System.out.println("You chose the SEARCH_PERSON COMMAND---");
46         searchPerson.searchInput(con);
47         break;
48     //ADD:
49     case "REMOVE_BOOK":
50         System.out.println("You chose the REMOVE_BOOK COMMAND---");
51         break;
52     //REMOVE_BOOK:
53     case "ADD_BOOK":
54         System.out.println("You chose the ADD_BOOK COMMAND---");
55         addbook.addBookInput(con);
56         break;
57     case "CHECKOUT_BOOK":
58         System.out.println("You are checking out a book---");
59         checkoutbook.searchInput(con);
60         break;
61     case "RETURN_BOOK":
62         System.out.println("You are returning a book you checked out---");
63         returnbook.searchInput(con);
64         break;
65     case "RENEW_BOOK":
66         System.out.println("You are renewing a book---");
67         renewbook.searchInput(con);
68         break;
69     case "PAY_FEE":
70         System.out.println("You are paying a fee---");
71         payfee.searchInput(con);
72         break;
73 }
```

---You chose the SEARCH_PERSON COMMAND---

---FETCHING THE SEARCH RESULT---

What is the ID number of the patron (can also type NULL)

What is the first name of the patron (can also type NULL)

What is the last name of the patron (can also type NULL)

How many results did you want to load(can also type NULL)

How did you want to sort it by(can also type NULL)

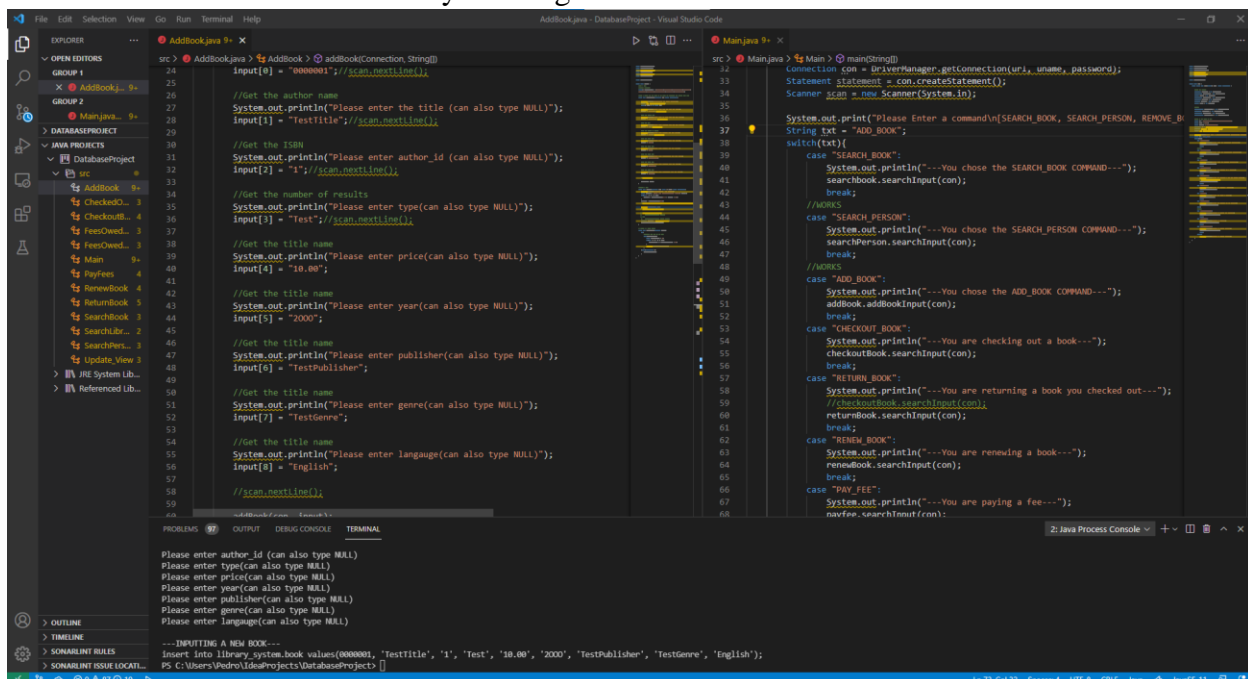
---PRINTING PERSON SEARCH RESULTS---

SELECT * FROM library.system.patron WHERE patron_name = 'Darrin';

1:Darrin,Rodriguez:1994-12-29:973 Augusta Ave. Apt. 39:Sandy;

PS C:\Users\Vedro\IdeaProjects\DatabaseProject>

Insert_book – When you add a new book into the database, insert the ISBN, title, publisher and the rest of the information or else you will get an error



```
src > AddBook.java > AddBook > addBook(Connection,StringID)
24 Input[0] = "00000001";
25
26 //Get the author name
27 System.out.println("Please enter the title (can also type NULL)");
28 Input[1] = "TestTitle";
29
30 //Get the ISBN
31 System.out.println("Please enter author_id (can also type NULL)");
32 Input[2] = "1";
33
34 //Get the number of results
35 System.out.println("Please enter type(can also type NULL)");
36 Input[3] = "Test";
37
38 //Get the title name
39 System.out.println("Please enter price(can also type NULL)");
40 Input[4] = "10.00";
41
42 //Get the title name
43 System.out.println("Please enter year(can also type NULL)");
44 Input[5] = "2000";
45
46 //Get the title name
47 System.out.println("Please enter publisher(can also type NULL)");
48 Input[6] = "TestPublisher";
49
50 //Get the title name
51 System.out.println("Please enter genre(can also type NULL)");
52 Input[7] = "TestGenre";
53
54 //Get the title name
55 System.out.println("Please enter language(can also type NULL)");
56 Input[8] = "English";
57
58 //scan.nextLine();
59
60 //INPUTING A NEW BOOK---
61 Insert into library.system.book values(00000001,'TestTitle','1','Test','10.00','2000','TestPublisher','TestGenre','English');
62 }

Main.java > Main > main(String[])
32 Connection con = DriverManager.getConnection(uri, uname, password);
33 Statement statement = con.createStatement();
34 Scanner scan = new Scanner(System.in);
35
36 System.out.println("Please Enter a command\nSEARCH_BOOK, SEARCH_PERSON, REMOVE_BOOK, ADD_BOOK, CHECKOUT_BOOK, RETURN_BOOK, RENEW_BOOK, PAY_FEE");
37 String txt = "ADD_BOOK";
38 switch(txt){
39     case "SEARCH_BOOK":
40         System.out.println("You chose the SEARCH_BOOK COMMAND---");
41         searchbook.searchInput(con);
42         break;
43     //REMOVE_PERSON:
44     case "SEARCH_PERSON":
45         System.out.println("You chose the SEARCH_PERSON COMMAND---");
46         searchPerson.searchInput(con);
47         break;
48     //ADD:
49     case "ADD_BOOK":
50         System.out.println("You chose the ADD_BOOK COMMAND---");
51         addbook.addBookInput(con);
52         break;
53     case "CHECKOUT_BOOK":
54         System.out.println("You are checking out a book---");
55         checkoutbook.searchInput(con);
56         break;
57     case "RETURN_BOOK":
58         System.out.println("You are returning a book you checked out---");
59         returnbook.searchInput(con);
60         break;
61     case "RENEW_BOOK":
62         System.out.println("You are renewing a book---");
63         renewbook.searchInput(con);
64         break;
65     case "PAY_FEE":
66         System.out.println("You are paying a fee---");
67         payfee.searchInput(con);
68         break;
69 }
```

Please enter author_id (can also type NULL)

Please enter type(can also type NULL)

Please enter price(can also type NULL)

Please enter year(can also type NULL)

Please enter publisher(can also type NULL)

Please enter genre(can also type NULL)

Please enter language(can also type NULL)

---INPUTING A NEW BOOK---

Insert into library.system.book values(00000001,'TestTitle','1','Test','10.00','2000','TestPublisher','TestGenre','English');

PS C:\Users\Vedro\IdeaProjects\DatabaseProject>

Checkout_Book – When you want to checkout a book to a patron, use their information, and the information of the book, and our triggers will make sure that the right copy goes to the right

The screenshot displays the IntelliJ IDEA IDE interface with two Java files open in the editor.

Left File: CheckoutBook.java

```
src > @ CheckoutBook.java > @ Checkoutbook > @ checkoutbook(Connection,String)
35      input[i] = "2020-01-01 00:00:00"/>scan.next();
36
37      checkoutbook(con, input);
38
39      //Testing the entire table for BOOK
40      public void returnAll(connection con) throws SQLException{
41          System.out.println("\n---PRINTING ALL OF THE BOOKS THAT HAVE BEEN CHECKED OUT---");
42          String query = "select * from library.system.checked_out";
43          Statement statement = con.createStatement();
44          ResultSet result = statement.executeQuery(query);
45          printResults(result);
46      }
47
48      //Method 2 : Search a Specific book
49      public void checkoutbook(connection con, String [] input) throws SQLException{
50          System.out.println("\n---CHECKOUT OUT A BOOK---");
51
52          //FOR adding to the where clause
53          String query = "CALL check_out_book(";
54          for(int i = 0; i < 3; i++){
55              query = query.concat(input[i] + "," );
56          }
57          query = query.concat("'" + input[3] + "')";
58          Statement statement = con.createStatement();
59          statement.executeQuery(query);
60          returnAll(con);
61      }
62
63      // METHOD 3 - PRINT RESULT
64      static void printResults(ResultSet result){
65          try{
66              //Testing that you get the data
67              while(result.next()){
68                  String universityData = "";
69                  for(int j = 1; j <= 6; j++){
70                      UniversityData += result.getString(j) + ";";
71                  }
72              }
```

Right File: Main.java

```
src > @ Main.java > @ Main > @ main(String)
31      connection con = DriverManager.getConnection(url, username, password);
32      Statement statement = con.createStatement();
33      Scanner scan = new Scanner(System.in);
34
35      System.out.println("Please enter a command(Search_BOOK, SEARCH_PERSON, REMOVE_B
36      String txt = "CHECKOUT BOOK";
37      switch(txt){
38          case "SEARCH BOOK":
39              System.out.println("---You chose the SEARCH_BOOK COMMAND---");
40              searchbook.searchInput(con);
41              break;
42          //NONEK
43          case "SEARCH PERSON":
44              System.out.println("---You chose the SEARCH_PERSON COMMAND---");
45              searchPerson.searchInput(con);
46              break;
47          //NONEK
48          case "ADD_BOOK":
49              System.out.println("---You chose the ADD_BOOK COMMAND---");
50              addbook.addbookInput(con);
51              break;
52          case "CHECKOUT BOOK":
53              System.out.println("---You are checking out a book---");
54              checkoutbook.checkoutInput(con);
55              break;
56          case "RETURN BOOK":
57              System.out.println("---You are returning a book you checked out---");
58              //checkoutbook.searchInput(con);
59              returnBook.searchInput(con);
60              break;
61          case "RENEW BOOK":
62              System.out.println("---You are renewing a book---");
63              renewBook.searchInput(con);
64              break;
65          case "PAY_FEE":
66              System.out.println("---You are paying a fee---");
67              navfee.searchInput(con);
68          }
```

Bottom Panel:

The bottom panel shows the PROBLEMS tab with the following messages:

- CHECKING OUT A BOOK---
- What is the patron_num (can also type N/A)
- What is the isbn (can also type N/A)
- What is the copy(can also type N/A)
- CHECKOUT OUT A BOOK---
- CALL check_out_book(1,9781421525686,1,"2020-01-01 00:00:00");
- PRINTING ALL OF THE BOOKS THAT HAVE BEEN CHECKED OUT---
- 11-SPR1421525686:1:2020-01-01 2020-01-22;
- C:\Users\Pedro\IdeaProjects\DatabaseProject\

```
src > ReturnBook.java >
14 //Make a book for the input of the books and determine the results from that
15 public void searchInput(connection con) throws SQLException{
16
17     System.out.println("\n---RETURN A BOOK---");
18     Scanner scan = new Scanner(System.in);
19     String[] input = new String [5];
20
21     //Get the patron num
22     System.out.println("What is the patron num (can also type NULL)");
23     input[0] = "1"/>scan.next();
24
25     //Get the isbn
26     System.out.println("What is the isbn (can also type NULL)");
27     input[1] = "9781421325686"/>scan.next();
28
29     //Get the Copy
30     System.out.println("What is the copy(can also type NULL)");
31     input[2] = "1"/>scan.next();
32
33     //Get the number of results
34     //System.out.println("What is the checkout date?");
35     input[3] = "2020-02-01 00:00:00"/>scan.next();
36
37     //Get the book state
38     System.out.println("What state is the book in");
39     input[4] = "LIKE NEW"/>scan.next();
40     returnBook(con, input);
41 }
42 //Testing the entire table for BOOK
43 public void returnAll(connection con) throws SQLException{
44 //todo
45     System.out.println("\n---PRINTING ALL THE CHECKED OUT BOOKS---");
46     String query = "select * from library.system.checked_out";
47     Statement statement = con.createStatement();
48     ResultSet result = statement.executeQuery(query);
49     printResults(result);
50 }
51 }
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86 }
87 }
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91 }
92 }
93 }
94 }
95 }
96 }
97 }
98 }
99 }
100 }
```

```
src > Main.java >
11 //Main
12 public class Main{
13     public static void main(String[] args){
14         Connection con = DriverManager.getConnection(url, username, password);
15         Statement statement = con.createStatement();
16         Scanner scan = new Scanner(System.in);
17
18         System.out.print("Please Enter a command\nSEARCH_BOOK, SEARCH_PERSON, REMOVE_B
19         String txt = "RETURN_BOOK";
20
21         switch(txt){
22             case "SEARCH_BOOK":
23                 System.out.println("---You chose the SEARCH_BOOK COMMAND---");
24                 searchBook.searchInput(con);
25                 break;
26             case "SEARCH_PERSON":
27                 System.out.println("---You chose the SEARCH_PERSON COMMAND---");
28                 searchPerson.searchInput(con);
29                 break;
30             case "REMOVE_BOOK":
31                 System.out.println("---You chose the REMOVE_BOOK COMMAND---");
32                 removeBook.removeInput(con);
33                 break;
34             case "ADD_BOOK":
35                 System.out.println("---You chose the ADD_BOOK COMMAND---");
36                 addBook.addBookInput(con);
37                 break;
38             case "CHECK_OUT_BOOK":
39                 System.out.println("---You are checking out a book---");
40                 checkoutBook.searchInput(con);
41                 break;
42             case "RETURN_BOOK":
43                 System.out.println("---You are returning a book you checked out---");
44                 //checkoutBook.searchInput(con);
45                 returnBook.searchInput(con);
46                 break;
47             case "RENEW_BOOK":
48                 System.out.println("---You are renewing a book---");
49                 renewBook.searchInput(con);
50                 break;
51             case "PAY_FEE":
52                 System.out.println("---You are paying a fee---");
53                 payFee.searchInput(con);
54                 break;
55         }
56     }
57 }
```

PROBLEMS 143 OUTPUT DEBUG CONSOLE TERMINAL

```
--RETURN A BOOK--
What is the patron_num (can also type NULL)
What is the isbn (can also type NULL)
What is the copy (can also type NULL)
What state is the book in

--RETURNING A OUT A BOOK--
CALL return_book(1,9781421325686,1,'2020-02-01 00:00:00','LIKE NEW');

--PRINTING ALL THE CHECKED OUT BOOKS--
PG C:\Users\Pedro\IdeaProjects\DatabaseProject\j
```

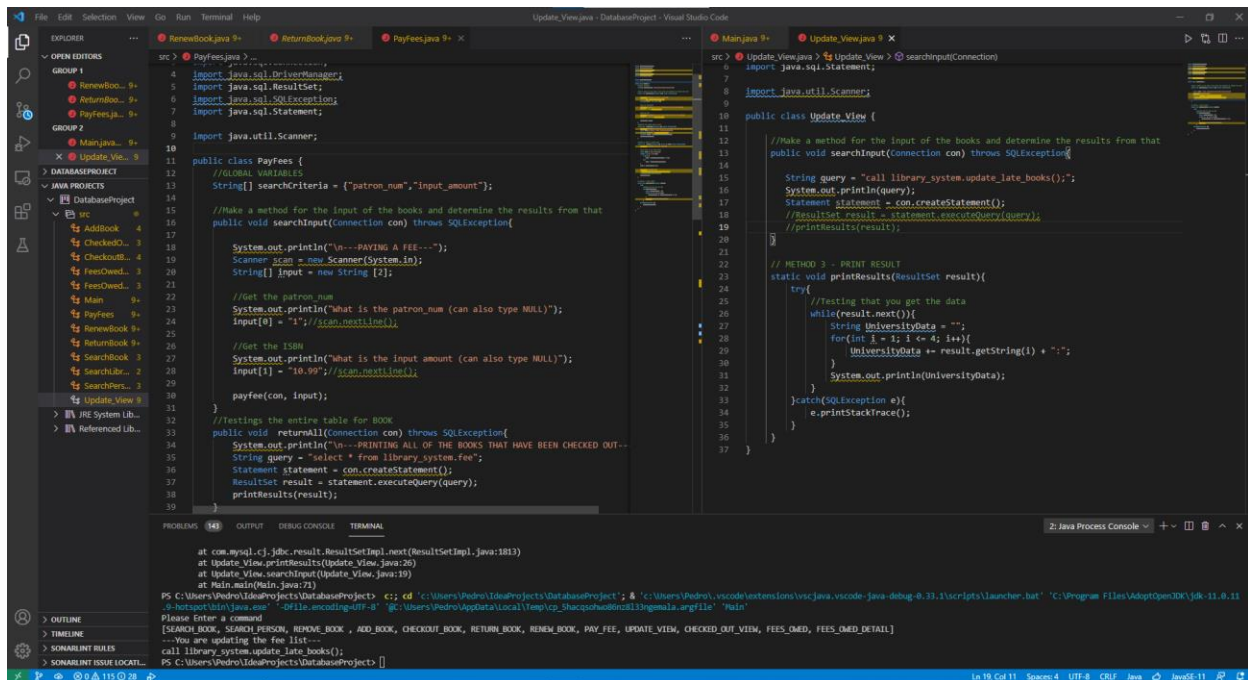
Ln 37, Col 29 Search4 UTF-8 CRLF Java JavaSE-11

Renew_book (patron_num, isbn, copy) – if a user brings their checked out book, they can renew the time.

```

src> @ RenewBook.java 9+ X @ ReturnBook.java 9+
src> @ RenewBook.java 9+ @ RenewBook (Connection, String[])
30 input[2] = "1"; //scan.nextLine();
31
32 //Get the number of results
33 //System.out.println("What is the checkout date?");
34 input[3] = "2020-01-01 00:00:00"; //scan.nextLine();
35
36 renewBook(con, input);
37
38 //Testing the entire table for BOOK
39 public void returnAll(Connection con) throws SQLException{
40 System.out.println("\n---PRINTING ALL OF THE BOOKS THAT HAVE BEEN CHECKED OUT---");
41 String query = "select * from library_system.checked_out";
42 Statement statement = con.createStatement();
43 ResultSet result = statement.executeQuery(query);
44 printResults(result);
45
46 //Method 2: Search a Specific Book
47 public void renewBook(Connection con, String [] input) throws SQLException{
48 System.out.println("\n---RENEW A CHECKED OUT BOOK---");
49
50 //FOR adding to the where clause
51 String query = "CALL renew_book(";
52 for(int i = 0; i < 3; i++){
53 if (i < 2)
54 query = query.concat(input[i] + "," );
55 else
56 query = query.concat(input[i]);
57 }
58 query = query.concat(")");
59
60 System.out.println(query);
61 returnAll(con);
62
63 // METHOD 3 - PRINT RESULTS
64
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```


Update_View –refresh the list of fees



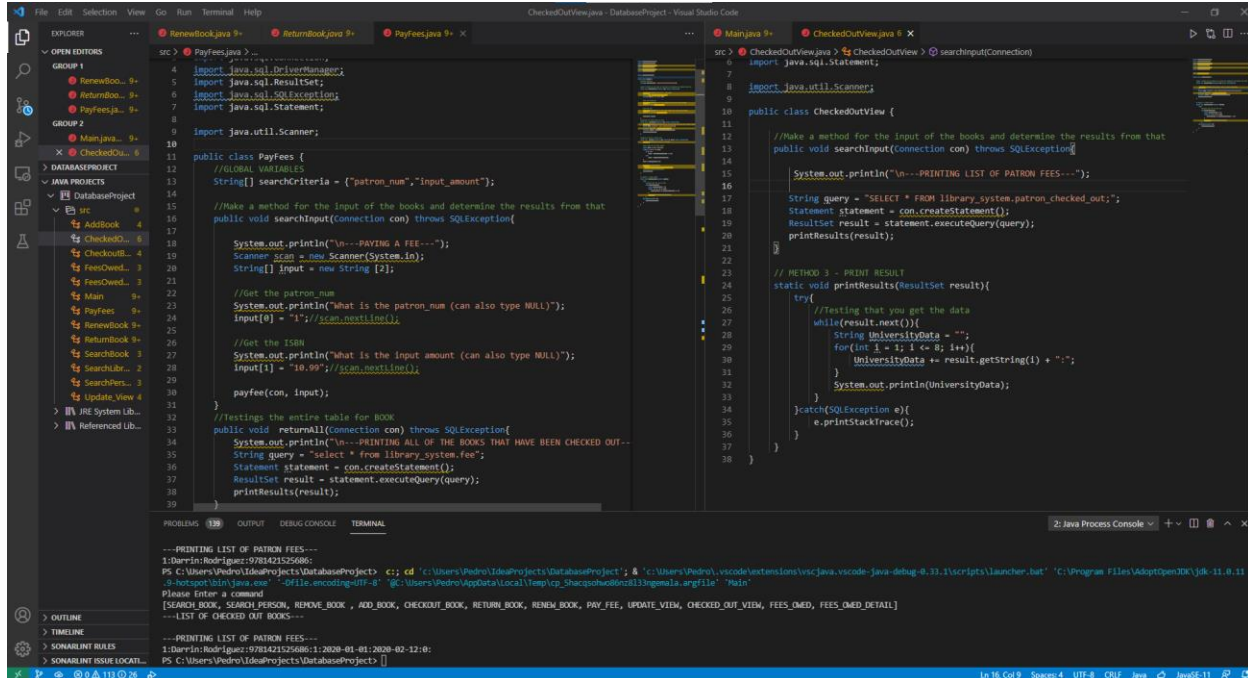
The screenshot displays the Visual Studio Code interface with the `Update_View.java` file open. The file is part of a project named `DatabaseProject`. The code defines a `PayFees` class with a `searchInput` method that takes a `Connection` and a `Scanner` as input. It prompts the user for a patron number and an input amount, then executes a SQL query to update the library system with the provided information. The `printResults` method is also shown, which prints the results of the query.

```
src > PayFees.java 9:
4 import java.sql.DriverManager;
5 import java.sql.ResultSet;
6 import java.sql.SQLException;
7 import java.sql.Statement;
8 import java.util.Scanner;
9
10 public class PayFees {
11     //GLOBAL VARIABLES
12     String[] searchCriteria = {"patron_num","input_amount"};
13
14     //Make a method for the input of the books and determine the results from that
15     public void searchInput(Connection con) throws SQLException{
16
17         System.out.println("\n---PAYING A FEE---");
18         Scanner scan = new Scanner(System.in);
19         String[] input = new String [2];
20
21         //Get the patron_num
22         System.out.println("what is the patron_num (can also type NULL)");
23         input[0] = "1"; //scan.nextLine();
24
25         //Get the ISBN
26         System.out.println("what is the input amount (can also type NULL)");
27         input[1] = "10.99"; //scan.nextLine();
28
29         payfee(con, input);
30
31     }
32
33     //Testing the entire table for BOOK
34     public void returnAll(Connection con) throws SQLException{
35         System.out.println("\n---PRINTING ALL OF THE BOOKS THAT HAVE BEEN CHECKED OUT---");
36         String query = "select * from library_system.fee";
37         Statement statement = con.createStatement();
38         ResultSet result = statement.executeQuery(query);
39         printResults(result);
40     }
41 }
```

The terminal output shows the execution of the program, including the prompts for the patron number and input amount, and the resulting SQL query and results.

```
at com.mysql.cj.jdbc.result.ResultSetImpl.next(ResultSetImpl.java:1813)
at Update_View.printResults(Update_View.java:26)
at Main.main(Main.java:72)
PS C:\Users\Pedro\IdeaProjects\DatabaseProject> cd 'C:\Users\Pedro\IdeaProjects\DatabaseProject'; & 'C:\Users\Pedro\vscode\extensions\vscode-java-debug-0.33.1\scripts\launcher.bat' 'C:\Program Files\AdoptOpenJDK\jdk-11.0.11-hotspot\bin\java.exe' -Dfile.encoding=utf-8 '@C:\Users\Pedro\AppData\Local\Temp\cp_shacpsho0bnz13ngmala.argfile' "Main"
Please enter a command:
[SEARCH BOOK, SEARCH PERSON, REMOVE BOOK, ADD BOOK, CHECKOUT BOOK, RETURN BOOK, RENEW BOOK, PAY FEE, UPDATE VIEW, CHECKED OUT VIEW, FEES OMD, FEES OMD DETAIL]
---You are updating the fee list---
call library_system.update_fees books();
PS C:\Users\Pedro\IdeaProjects\DatabaseProject>
```

Checkout_view – returns a list of all the books that have been checked out



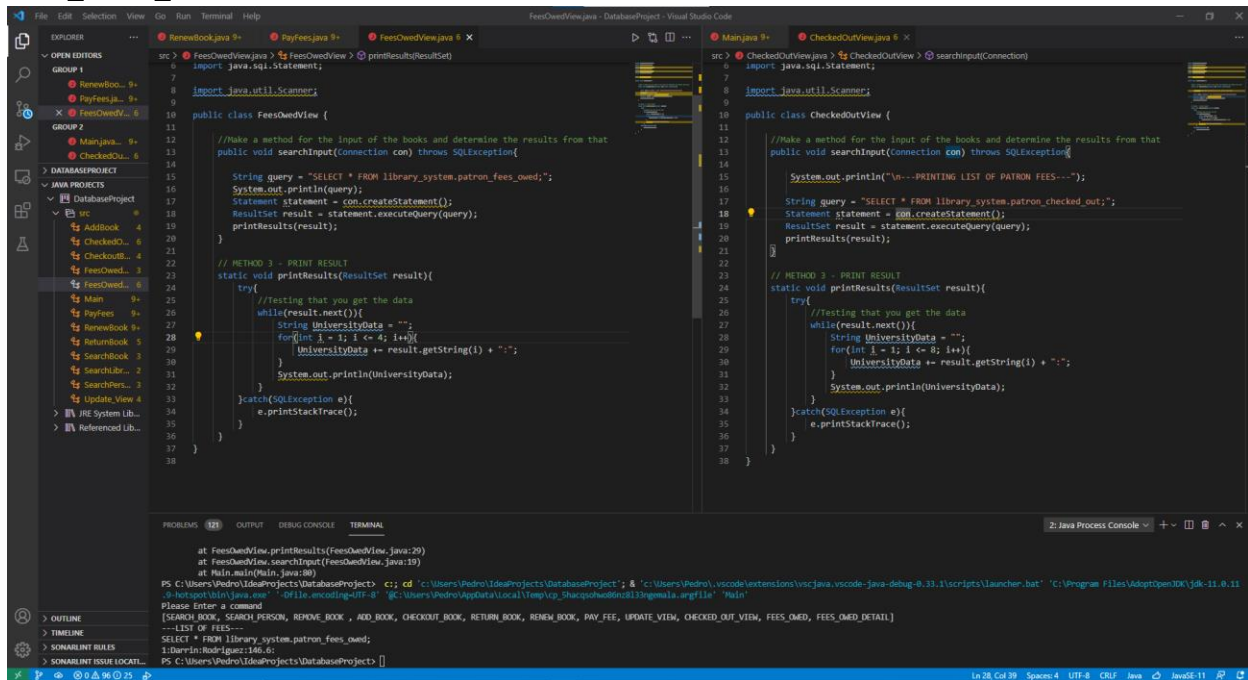
The screenshot displays the Visual Studio Code interface with the `Checkout_View.java` file open. The file is part of a project named `DatabaseProject`. The code defines a `CheckedOutView` class with a `searchInput` method that takes a `Connection` and a `Scanner` as input. It prompts the user for a patron number and an input amount, then executes a SQL query to retrieve the list of books that have been checked out. The `printResults` method is also shown, which prints the results of the query.

```
src > CheckedOutView.java 9:
4 import java.sql.DriverManager;
5 import java.sql.ResultSet;
6 import java.sql.SQLException;
7 import java.sql.Statement;
8 import java.util.Scanner;
9
10 public class CheckedOutView {
11     //Make a method for the input of the books and determine the results from that
12     public void searchInput(Connection con) throws SQLException{
13
14         System.out.println("\n---PRINTING LIST OF PATRON FEES---");
15
16         String query = "SELECT * FROM library_system.patron_checked_out";
17         Statement statement = con.createStatement();
18         ResultSet result = statement.executeQuery(query);
19         printResults(result);
20     }
21
22     // METHOD 3 - PRINT RESULT
23     static void printResults(ResultSet result){
24         try{
25             //Testing that you get the data
26             while(result.next()){
27                 String UniversityData = "";
28                 for(int i = 1; i <= 4; i++){
29                     UniversityData += result.getString(i) + " ";
30                 }
31                 System.out.println(UniversityData);
32             }
33         }catch(SQLException e){
34             e.printStackTrace();
35         }
36     }
37 }
```

The terminal output shows the execution of the program, including the prompts for the patron number and input amount, and the resulting SQL query and results.

```
---PRINTING LIST OF PATRON FEES---
1:Darvin-Rodríguez:9781423525686:1:2020-01-01:2020-02-12:10:
PS C:\Users\Pedro\IdeaProjects\DatabaseProject>
```

Fees_owed_view – returns a list of all the fees that are owed.



```
src > FeesOwedView.java > FeesOwedView > printResults(ResultSet)
import java.sql.*;
import java.util.Scanner;

public class FeesOwedView {

    //Make a method for the input of the books and determine the results from that
    public void searchInput(Connection con) throws SQLException{

        String query = "SELECT * FROM library_system.patron_fees_owed;";
        System.out.println(query);
        Statement statement = con.createStatement();
        ResultSet result = statement.executeQuery(query);
        printResults(result);

    }

    // METHOD 3 - PRINT RESULT
    static void printResults(ResultSet result){
        try{
            //Testing that you get the data
            while(result.next()){
                String UniversityData = "";
                for(int i = 1; i <= 4; i++){
                    UniversityData += result.getString(i) + " ";
                }
                System.out.println(UniversityData);
            }
        }catch(SQLException e){
            e.printStackTrace();
        }
    }
}
```

```
src > CheckedOutView.java > CheckedOutView > searchInput(Connection)
import java.sql.*;
import java.util.Scanner;

public class CheckedOutView {

    //Make a method for the input of the books and determine the results from that
    public void searchInput(Connection con) throws SQLException{

        System.out.println("\n---PRINTING LIST OF PATRON FEES---");

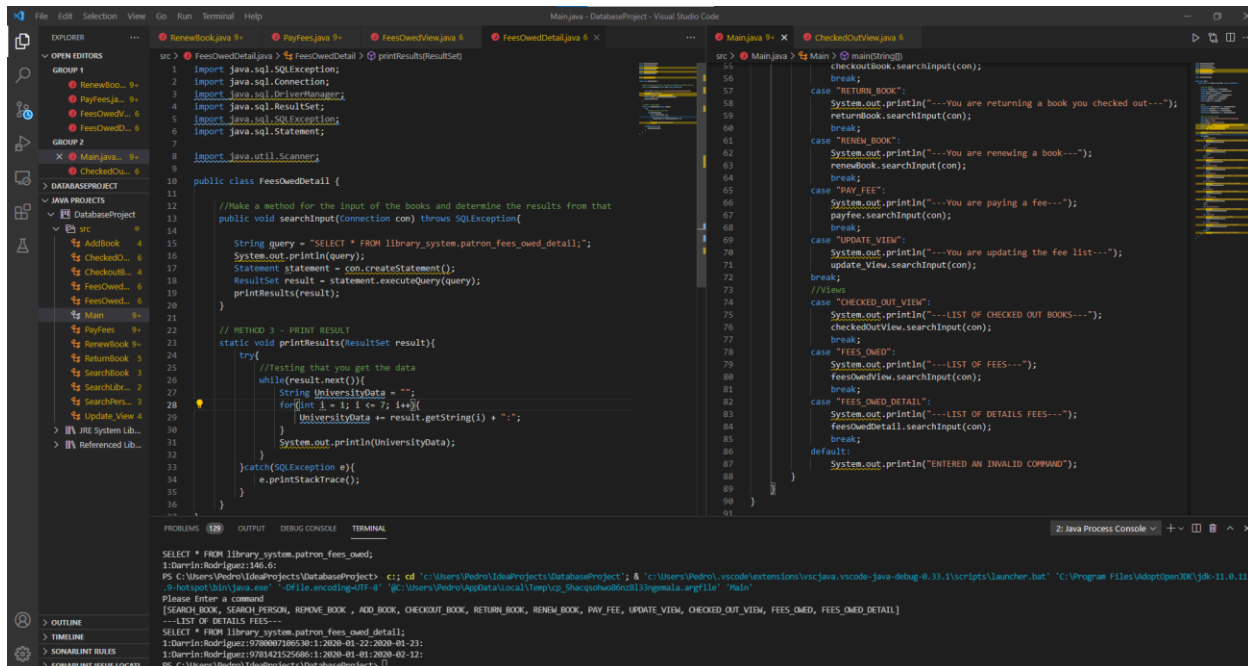
        String query = "SELECT * FROM library_system.patron_checked_out;";
        Statement statement = con.createStatement();
        ResultSet result = statement.executeQuery(query);
        printResults(result);

    }

    // METHOD 3 - PRINT RESULT
    static void printResults(ResultSet result){
        try{
            //Testing that you get the data
            while(result.next()){
                String UniversityData = "";
                for(int i = 1; i <= 4; i++){
                    UniversityData += result.getString(i) + " ";
                }
                System.out.println(UniversityData);
            }
        }catch(SQLException e){
            e.printStackTrace();
        }
    }
}
```

```
at FeesOwedView.printResults(FeesOwedView.java:20)
at FeesOwedView.searchInput(FeesOwedView.java:19)
at Main.main(Main.java:8)
PS C:\Users\Pedro\IdeaProjects\DatabaseProject> cd 'C:\Users\Pedro\IdeaProjects\DatabaseProject'; & 'C:\Users\Pedro\vscode\extensions\vscode-java-debug-0.33.1\scripts\launcher.bat' 'C:\Program Files\AdoptOpenJDK\jdk-11.0.11-hotspot\bin\java.exe' -Dfile.encoding=UTF-8 '@C:\Users\Pedro\AppData\Local\Temp\vscode\vscode\jre\bin\java.exe' "Main"
Please enter a command
[SEARCH_BOOK, SEARCH_PERSON, RENEW_BOOK, ADD_BOOK, CHECKOUT_BOOK, RETURN_BOOK, RENEW_BOOK, PAY_FEE, UPDATE_VIEW, CHECKED_OUT_VIEW, FEES_OWED, FEES_OWED_DETAIL]
---LIST OF FEES---
SELECT * FROM library_system.patron_fees_owed;
1:Darrin-Rodriguez:146.6;
PS C:\Users\Pedro\IdeaProjects\DatabaseProject>
```

Fees_owed_details – returns a list of all the fees with more information on the patron who uses them



```
src > FeesOwedDetail.java > FeesOwedDetail > printResults(ResultSet)
import java.sql.*;
import java.util.Scanner;

public class FeesOwedDetail {

    //Make a method for the input of the books and determine the results from that
    public void searchInput(Connection con) throws SQLException{

        String query = "SELECT * FROM library_system.patron_fees_owed_detail;";
        System.out.println(query);
        Statement statement = con.createStatement();
        ResultSet result = statement.executeQuery(query);
        printResults(result);

    }

    // METHOD 3 - PRINT RESULT
    static void printResults(ResultSet result){
        try{
            //Testing that you get the data
            while(result.next()){
                String UniversityData = "";
                for(int i = 1; i <= 7; i++){
                    UniversityData += result.getString(i) + " ";
                }
                System.out.println(UniversityData);
            }
        }catch(SQLException e){
            e.printStackTrace();
        }
    }
}
```

```
src > Main.java > Main > main()
import java.sql.*;
import java.util.Scanner;

public class Main {

    //Make a method for the input of the books and determine the results from that
    public void searchInput(Connection con) throws SQLException{

        case "RETURN_BOOK":
            System.out.println("---You are returning a book you checked out---");
            returnBook.searchInput(con);
            break;

        case "RENEW_BOOK":
            System.out.println("---You are renewing a book---");
            renewBook.searchInput(con);
            break;

        case "PAY_FEE":
            System.out.println("---You are paying a fee---");
            payFee.searchInput(con);
            break;

        case "UPDATE_VIEW":
            System.out.println("---You are updating the fee list---");
            updateView.searchInput(con);
            break;

        //Views
        case "CHECKED_OUT_VIEW":
            System.out.println("---LIST OF CHECKED OUT BOOKS---");
            checkedOutView.searchInput(con);
            break;

        case "FEES_OWED":
            System.out.println("---LIST OF FEES---");
            feesOwedView.searchInput(con);
            break;

        case "FEES_OWED_DETAIL":
            System.out.println("---LIST OF DETAILS FEES---");
            feesOwedDetail.searchInput(con);
            break;

        default:
            System.out.println("ENTERED AN INVALID COMMAND");
    }
}
```

```
SELECT * FROM library_system.patron_fees_owed;
1:Darrin-Rodriguez:146.6;
PS C:\Users\Pedro\IdeaProjects\DatabaseProject> cd 'C:\Users\Pedro\IdeaProjects\DatabaseProject'; & 'C:\Users\Pedro\vscode\extensions\vscode-java-debug-0.33.1\scripts\launcher.bat' 'C:\Program Files\AdoptOpenJDK\jdk-11.0.11-hotspot\bin\java.exe' -Dfile.encoding=UTF-8 '@C:\Users\Pedro\AppData\Local\Temp\vscode\vscode\jre\bin\java.exe' "Main"
Please enter a command
[SEARCH_BOOK, SEARCH_PERSON, RENEW_BOOK, ADD_BOOK, CHECKOUT_BOOK, RETURN_BOOK, RENEW_BOOK, PAY_FEE, UPDATE_VIEW, CHECKED_OUT_VIEW, FEES_OWED, FEES_OWED_DETAIL]
---LIST OF DETAILS FEES---
SELECT * FROM library_system.patron_fees_owed_detail;
1:Darrin-Rodriguez:17000778030:1:2020-01-22:2020-01-23;
1:Darrin-Rodriguez:1708142525686:1:2020-01-01:2020-02-12;
PS C:\Users\Pedro\IdeaProjects\DatabaseProject>
```