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💽 bankingapp-with-impexp-stream-stats - bankingapp-with-impexp-stream-stats/src/com/indium/bankingapp/BankingAppMain.java - Edipse IDE
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Q 18 19 5
□ ■ Task List ×
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                                                                 60
                                                                                                        System.out.println("Exiting the Banking App.");
  > ■ JRE System Library [JavaSE-17]
                                                                                                                                                                                                              Find
                                                                                                                                                                                                                              ► All ► Activate...
                                                                                                         scanner.close();

→ In src

                                                                 62
                                                                                                         System.exit(0);
     v - com.indium.bankingapp
                                                                                                   default:
                                                                                                        System.out.println("Invalid choice. Please enter a valid option."
                                                                 64
         > A BankingAppMain.java
                                                                 65

    a com.indium.bankingapp.model

                                                                                       } catch (InputMismatchException e) {
    System.out.println("Invalid input. Please enter a valid choice.");
    scanner.nextLine(); // Consume the invalid input
                                                                 66
67
         > 🖪 Account.java

→ B com.indium.bankingapp.service

         AccountService.java
                                                                 69
                                                                                       } catch (Exception e) {
   System.err.println("An error occurred: " + e.getMessage());
                                                                 70
71
72
73
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75
76
77
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80
         AccountServiceHashMapImpl.java
                                                                                       }
                                                                                 }
                                                                           private static AccountService<Account> createAccountService() {
                                                                                                                                                                                                             return new AccountServiceHashMapImpl();

■ com.indium.bankingapp

                                                                           private static void displayMenu() {
    System.out.println("\nBanking App Menu:");
    System.out.println("1] Add Account");
    System.out.println("2] View All Account");
    System.out.println("3] View Account");
    System.out.println("4] Update Account");
    System.out.println("5] Delete Account");
    System.out.println("6] Print Statistics");
    System.out.println("7] Import");
    System.out.println("8] Export");
    System.out.println("9] Exit");
    System.out.println("eller your choice: ");
}

→ ⊕ BankingAppMain

                                                                                                                                                                                                                    * accountService : AccountService
                                                                                                                                                                                                                    e scanner : Scanner
                                                                 81
                                                                 82
83
                                                                                                                                                                                                                    " importCount : int
                                                                                                                                                                                                                   e i exportCount : int
                                                                 84
85
                                                                                                                                                                                                                   • * main(String[]) : void
                                                                 86
87
                                                                                                                                                                                                                    ■ * createAccountService() : Accoun
                                                                                                                                                                                                                    displayMenu(): void
                                                                 88
                                                                                                                                                                                                                    ■å getUserChoice() : int
                                                                 89
                                                                                                                                                                                                                    ■នី captureAccountDetails() : void
                                                                 90
                                                                                                                                                                                                                    calculateInterestAndUpdateBalar
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BankingApp-with-impexp-stream-stats [indium_javabc]

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                                                                                                                                                                  □ □ Task List ×
                                                                                                                                                                                 private static synchronized int getUserChoice() {
   int choice = scanner.nextInt();
                                                     938
 ▶ JRE System Library [JavaSE-17]
                                                                                                                                                                                     • All • Activate... @
                                                                                                                                                                        Find
                                                     94
 y ₿src
                                                     95
                                                                  scanner.nextLine();

y 

→ com.indium.bankingapp

                                                     96
                                                                  return choice;
       > 🖟 Banking App Main. java
                                                     98

    B com.indium.bankingapp.model

                                                              private static synchronized void captureAccountDetails() {
                                                     99=
        > Account.java
                                                    100

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→ com.indium.bankingapp.service

                                                    101
                                                                       System.out.print("Enter Account Type (savings/deposit/loan): ");
       > AccountService.java
                                                    102
                                                                       String accountType = scanner.nextLine().toLowerCase();
                                                    103
       > 🖟 AccountServiceHashMapImpl.java
                                                                       if (!isValidAccountType(accountType)) {
    System.out.println("Invalid account type. Please enter 'savings', 'deposi
                                                    104
                                                    105
                                                    107
                                                                       }
                                                    108
                                                                                                                                                                       BOutline × P E P2 X X 0 X 1 □ □
                                                                       System.out.print("Enter Account ID: ");
int id = scanner.nextInt();
                                                    109

⊕ com.indium.bankingapp

                                                    110
                                                    111
112
                                                                       scanner.nextLine();

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→ BankingAppMain

<sup>a</sup> accountService : AccountService

                                                    113
                                                                        // Validate that ID is positive
                                                                                                                                                                             s scanner : Scanner
                                                    114
                                                                       if (id <= 0) {
                                                    115
                                                                            System.out.println("Invalid account ID. Please enter a positive integer."
                                                                                                                                                                             " importCount : int
                                                                                                                                                                             • 8 exportCount : int
                                                    116
                                                                            return;
                                                    117
                                                                                                                                                                             • * main(String[]) : void
                                                    118
                                                                                                                                                                             createAccountService() : Account
                                                    119
                                                                       System.out.print("Enter Account Name: ");
                                                                                                                                                                             " displayMenu(): void
                                                    120
121
                                                                       String name = scanner.nextLine();
                                                                                                                                                                             ■å getUserChoice(): int
                                                    122
                                                                        // Validate that the name is not empty
                                                                                                                                                                             a captureAccountDetails() : void
                                                                       if (name.isEmpty()) {
    System out println("Account name cannot be empty "):
                                                    123
                                                                                                                                                                             ■å calculateInterestAndUpdateBalar 🗸
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→ S bankingapp-with-impexp-stream-stats [indium_javabo 122]

                                                                 // Validate that the name is not empty
 ⇒ ■ JRE System Library [JavaSE-17]
                                               123
                                                                if (name.isEmpty()) {
                                                                                                                                                       Find
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                                                                     System.out.println("Account name cannot be empty.");

→ # src

                                               125

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■ com.indium.bankingapp

                                               126
      BankingAppMain.java
                                                                System.out.print("Enter Initial Balance: ");
double balance = scanner.nextDouble();
    🕶 🖷 com.indium.bankingapp.model
                                               128
       Account.java
                                               130
                                                                scanner.nextLine();

→ 

→ com.indium.bankingapp.service

                                                                                                                                           Line: 123
       > AccountService.java
                                                132
                                                                 // Validate that the balance is non-negative

AccountServiceHashMapImpl.java

                                               133
                                                                if (balance < 0) {
                                                                     System.out.println("Initial balance cannot be negative.");
                                               134
                                               135
                                                                     return;
                                                136
                                                137
                                                                                                                                                       E Outline × □ E B R R V • V 1 = □
                                                                System.out.print("Enter Rate of Interest (ROI): ");
                                                                double roi = scanner.nextDouble();
scanner.nextLine();
                                               139
                                                                                                                                                          # com.indium.bankingapp

✓ Ø<sub>6</sub> BankingAppMain

                                               141
142
                                                                   Validate that the ROI is non-negative
                                                                                                                                                            * accountService : AccountService
                                               143
144
                                                                if (roi < 0) {
                                                                                                                                                            * scanner : Scanner
                                                                     System.out.println("Rate of Interest (ROI) cannot be negative.");
                                                                                                                                                            • importCount : int
                                                145
                                                                                                                                                            esportCount : int
                                               146
                                                                1
                                                147
                                                                                                                                                            • * main(String[]) : void
                                                                Account account = new Account(id, name, balance, roi, accountType);
                                               148
                                                                                                                                                            createAccountService() : Account
                                                                                                                                                            displayMenu(): void
                                                                // Calculate and update the balance with interest
calculateInterestAndUpdateBalance(account);
                                               150
                                                                                                                                                            ■å getUserChoice(): int
                                               151
                                                                                                                                                            a captureAccountDetails(): void
                                                152
                                                                if (accountService.createAccount(account)) {
                                               153
                                                                                                                                                            📲 å calculateInterestAndUpdateBalar 🗸
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                                                                                                                                                                                                                   if (accountService.createAccount(account)) {
    System.out.println("Account created successfully.");
      ⇒ M JRE System Library [JavaSE-17]
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→ In src

                                                                                                                                                           155
                                                                                                                                                                                                                   } else {
                                                                                                                                                                                                                                System.out.println("Failed to create an account.");

    # com.indium.bankingapp

                                                                                                                                                           156
                                                                                                                                                           157
                      BankingAppMain.java
                                                                                                                                                                                                    } catch (InputMismatchException e) {
    System.out.println("Invalid input. Please enter valid data.");
                                                                                                                                                           158
              # com.indium.bankingapp.model
                        Account.java
                                                                                                                                                                                                     scanner.nextLine(); // Consume the invalid input
} catch (Exception e) {
   System.err.println("An error occurred: " + e.getMessage());
                                                                                                                                                           160

→ <u>#</u> com.indium.bankingapp.service

                                                                                                                                                            161
                       AccountService.java
                                                                                                                                                            162
                                                                                                                                                            163
                                                                                                                                                                                                     }
                       AccountServiceHashMapImpl.java
                                                                                                                                                            164
                                                                                                                                                                                      }
                                                                                                                                                            165
                                                                                                                                                            166
                                                                                                                                                                                       private static synchronized void calculateInterestAndUpdateBalance(Account account) {
                                                                                                                                                           167
                                                                                                                                                                                                     double balance = account.getBalance();
double roi = account.getRoi();
                                                                                                                                                            168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              多Outline× シモルスズ・マミーロ
                                                                                                                                                                                                      double interest = balance * roi:
                                                                                                                                                           169
                                                                                                                                                            170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       # com.indium.bankingapp
                                                                                                                                                           171
172
                                                                                                                                                                                                      // Add interest to the balance
double newBalance = balance + interest;

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⑤ BankingAppMain

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a accountService : AccountService
                                                                                                                                                           173
                                                                                                                                                                                                      account.setBalance(newBalance); // Update the balance attribute directly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               * scanner : Scanner
                                                                                                                                                           174
                                                                                                                                                           175
176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              private static boolean isValidAccountType(String accountType) {
   return accountType.equals("savings") || accountType.equals("deposit") || accountType.equals("deposit ") || accountType.equals("deposit ") || accountType.equals("deposit ") || accountType.equal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * * exportCount : int
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              • * main(String[]) : void
                                                                                                                                                                                       }
                                                                                                                                                           178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               s createAccountService(): Account
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               displayMenu(): void
                                                                                                                                                                                      private static synchronized void viewAllAccounts() {
   List<Account> accounts = new ArrayList<>(accountService.getAllAccounts());
                                                                                                                                                           180
                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ■å getUserChoice(): int
                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               • acaptureAccountDetails(): void
                                                                                                                                                                                                     if (!accounts.isEmpty()) {
    System.out.println("All Accounts:"):
                                                                                                                                                           183

    å calculateInterestAndUpdateBalar 

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🥘 bankingapp-with-impexp-stream-stats - bankingapp-with-impexp-stream-stats/src/com/indium/bankingapp/BankingAppMain.java - Eclipse IDE Eile Edit Source Refactor Navigate Search Project Run Window Help 9、181 18 型 □ □ ■ Task List × - -if (!accounts.isEmpty()) {
 System.out.println("All Accounts:");
 for (Account account; accounts) { (3 ⇒ M JRE System Library [JavaSE-17] • All • Activate... 184 → in src 185 →

com.indium.bankingapp System.out.println(account.toString());
System.out.println("----"); 186 187 > BankingAppMain.java } else { 189 > Account.java System.out.println("No accounts found."); → # com.indium.bankingapp.service 191 192 > AccountService.iava 193 AccountServiceHashMapImpl.java 194 private static synchronized void viewAccountDetails() { try {
 System.out.print("Enter Account ID to view: "); 195 196 197 198 int id = scanner.nextInt();
scanner.nextLine(); SE Outline × P E P₂ X X 0 X 1 = □ 199 Account account = accountService.getAccount(id); ⊞ com.indium.bankingapp 200 201 ▼ ⑤ BankingAppMain if (account != null) {
 System.out.println("Account Details:"); 202 accountService : AccountService 203 e s scanner : Scanner 204 System.out.println(account.toString()); = * importCount : int 205 } else { 206 207 System.out.println("Account not found."); = 6 exportCount : int • * main(String[]) : void } catch (InputMismatchException e) {
 System.out.println("Invalid input. Please enter a valid ID.");
 scanner.nextLine(); // Consume the invalid input 208 s createAccountService() : Account 209 s displayMenu() : void 210 ■å getUserChoice(): int 211 212 } ■å captureAccountDetails() : void 213 ■å calculateInterestAndUpdateBalar 🗸 private static synchronized void updateAccountDetails() {

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🎑 bankingapp-with-impexp-stream-stats - bankingapp-with-impexp-stream-stats/src/com/indium/bankingapp/BankingAppMain.java - Eclipse IDE
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                                                                                                                                                                          □ □ ■ Task List ×
                                                                                                                                                                                         private static synchronized void updateAccountDetails() {

» JRE System Library [JavaSE-17]

                                                       215
                                                                      try {
                                                                                                                                                                                               All Activate...
                                                                                                                                                                                                                   (3
                                                       216
                                                                           System.out.print("Enter Account ID to update: ");
                                                                           int id = scanner.nextInt();
scanner.nextLine();
                                                       217

→ 

★ com.indium.bankingapp

                                                       218
        BankingAppMain.java

    # com.indium.bankingapp.model

                                                                           Account existingAccount = accountService.getAccount(id);
                                                       228
                                                       221
        Account java
                                                                           if (existingAccount != null) {
   System.out.print("Enter New Account Name: ");
   String newName = scanner.nextLine();
   System.out.print("Enter New Account Balance: ");
   double newBalance = scanner.nextDouble();
   scanner.nextline();
                                                       222

→ 

B com.indium.bankingapp.service

                                                       223
       AccountService.java
                                                       224
225
       AccountServiceHashMapImpl.java
                                                       226
                                                       227
                                                                                scanner.nextLine();
                                                       228
                                                                               Account updatedAccount = new Account(id, newName, newBalance, exis
                                                       229
                                                                                                                                                                                B=Outline × F E P2 × √ 0 × 1 = □
                                                       230
                                                                                if (accountService.updateAccount(id, updatedAccount)) {
   System.aut.println("Account updated successfully.");
                                                       231
                                                                                                                                                                                   a com.indium.bankingapp
                                                       232

→ G<sub>a</sub> BankingAppMain

                                                       233
                                                                                } else {
                                                       234
                                                                                    System.out.println("Failed to update the account.");
                                                                                                                                                                                      * * accountService : AccountService
                                                       235
                                                                                                                                                                                      * 5 scanner : Scanner
                                                                           } else {
                                                       236
                                                                                                                                                                                      * importCount : int
                                                       237
                                                                               System.out.println("Account not found.");
                                                                                                                                                                                      * exportCount : int
                                                       238
                                                                                                                                                                                      • f main(String[]) : void
                                                       239
                                                                     } catch (InputMismatchException e) {
                                                                           System.out.println("Invalid input. Please enter valid data.");
scanner.nextLine(); // Consume the invalid input
                                                       249
                                                                                                                                                                                      " createAccountService(): Account
                                                       241
                                                                                                                                                                                      displayMenu(): void
                                                       242
                                                                                                                                                                                      ■å getUserChoice(): int
                                                       243
                                                                                                                                                                                      ■នំ captureAccountDetails() : void
                                                       244
                                                                 private static synchronized void deleteAccount() {
                                                                                                                                                                                      👊 calculateInterestAndUpdateBalaı 🗸
                                                       2459
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                                                                                                                                                                   private static synchronized void deleteAccount() {
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                                                                                                                                                                                        (2
                                                             try {
    System.out.print("Enter Account ID to delete: ");
                                                246

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                                                247

→ ■ com.indium.bankingapp

                                                248
                                                                 int id = scanner.nextInt();
scanner.nextLine();
      BankingAppMain.java
                                                249
                                                250
    d com.indium.bankingapp.model
                                                                 if (accountService.deleteAccount(id)) {
   System.out.println("Account deleted successfully.");
                                                251
       > B Account.java

→ <u>#</u> com.indium.bankingapp.service

                                                                 } else {
                                                253
       AccountService.java
                                                                     System.out.println("Failed to delete the account.");
                                                255
       AccountServiceHashMapImpl.java
                                                             } catch (InputMismatchException e) {
   System.out.println("Invalid input. Please enter a valid ID.");
   scanner.nextLine(); // Consume the invalid input
                                                256
                                                257
258
                                                259
                                                260
                                                        }
                                                                                                                                                         Br Outline × □ E P₂ X X • X 1 = □
                                                261
                                                                                                                                                            # com.indium.bankingapp
                                                         private static synchronized void handlePrintStatisticsMenu() {
                                                262
                                                263

→ G BankingAppMain

                                                                 displayStatisticsMenu();
int choice = getUserChoice();
                                                                                                                                                              accountService : AccountService
                                                265
                                                                                                                                                              • scanner : Scanner
                                                266
267
                                                                                                                                                              • 5 importCount : int
                                                                 try {
   switch (choice) {
                                                268
269
                                                                                                                                                              of exportCount : int
                                                                                                                                                              • f main(String[]) : void
                                                                              printAccountsAbove100000();
break;
                                                270
271
272
                                                                                                                                                              * createAccountService() : Account
                                                                                                                                                              displayMenu(): void
                                                                          case 2:
                                                                                                                                                               ■å getUserChoice() : int
                                                                              printAccountTypeCounts();
break;
                                                273
                                                                                                                                                               ■ aptureAccountDetails(): void
                                                275
                                                                          case 3:
                                                                                                                                                              ■å calculateInterestAndUpdateBalar 🗸
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🎑 bankingapp-with-impexp-stream-stats - bankingapp-with-impexp-stream-stats/src/com/indium/bankingapp/BankingAppMain.java - Eclipse IDE
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                                                                                                                                                                                                                               • All • Activate...
                                                                                                    case 3:
                                                                                                         printSortedAccountTypeCounts();
  Y SIC
                                                                 277
                                                                                                          break;

→ 

■ com.indium.bankingapp

                                                                 278
                                                                                                    case 4:
         BankingAppMain.java
                                                                                                         printAvgBaLanceByAccountType();
break;
                                                                279
280

    mcom.indium.bankingapp.model

                                                                                                    case 5:
         Account.java
                                                                 281
                                                                                                          ListAccountIdsByName();

→ # com.indium.bankingapp.service

                                                                 282
                                                                                                         break;
                                                                 283
         > AccountService.java
                                                                 284
                                                                                                    case 6:

3. AccountServiceHashMapImpl.java

                                                                                                          return; // Return to the main menu
                                                                                                    default:
                                                                 286
                                                                 287
                                                                                                         System.out.println("Invalid choice. Please enter a valid option."
                                                                 288
                                                                                       } catch (InputMismatchException e) {
   System.out.println("Invalid input. Please enter a valid choice.");
   scanner.nextLine(); // Consume the invalid input
                                                                 289
                                                                                                                                                                                                              S Outline × VE 1% X V → V 1 = □
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291
                                                                                                                                                                                                                 # com.indium.bankingapp
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✓ O₀ BankingAppMain

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                                                                                                                                                                                                                     <sup>8</sup> accountService : AccountService
                                                                            }
                                                                                                                                                                                                                     e scanner : Scanner
                                                                 295
                                                                 296
                                                                            private static void displayStatisticsMenu() {
                                                                                                                                                                                                                     = 8 importCount : int
                                                                                  vate static void displayStatisticsMenu() {
   System.out.println("\nStatistics Menu:");
   System.out.println("1] No of accounts which have balance more than 1 Lac");
   System.out.println("2] Show no of account by account type");
   System.out.println("3] Show no of accounts by account type with sorting");
   System.out.println("4] Show avg balance by account type");
   System.out.println("5] List account ids whose account name contains given name");
   System.out.println("6] Back to Main Menu");
   System.out.print("Enter your choice: ");
                                                                 297
                                                                                                                                                                                                                     = f exportCount : int
                                                                 298
                                                                                                                                                                                                                     • * main(String[]) : void
                                                                 299
300
                                                                                                                                                                                                                     createAccountService() : Account
                                                                301
302
                                                                                                                                                                                                                     displayMenu(): void
                                                                                                                                                                                                                     ■å getUserChoice(): int
                                                                 303
                                                                                                                                                                                                                     • a captureAccountDetails(): void
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                                                                                                                                                                                                                     ■å calculateInterestAndUpdateBalar 🗸
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private static void printAccountsAbove100000() {
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                                                                                                                                                                                                                         (9
                                                                        List<Account> accounts = new ArrayList<>(accountService.getAllAccounts());
long accountsWithHighBalance = accounts.stream().filter(account -> account.getBal
System.out.println("No. of accounts with balance more than 1 Lac: " + accountsWit
                                                         308

→ 

B src

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# com.indium.bankingapp

                                                         310
                                                         311
                                                                  3
        Banking App Main. java
                                                         312

    # com.indium.bankingapp.model

                                                         313
                                                                  private static void printAccountTypeCounts() {
    Map<String, Long> accountTypeCounts = accountService.getAllAccounts().stream()
        > Account.iava
                                                         314

    ä com.indium.bankingapp.service

                                                         315
                                                                                  .collect(Collectors.groupingBy(Account::getAccountType, Collectors.counti
        > AccountService.java
                                                         316
                                                                        System.out.println("No of accounts by account type:");
accountTypeCounts.forEach((accountType, count) -> {
    System.out.println(accountType + ": " + count);
}

AccountServiceHashMapImpl.java

                                                         318
                                                         319
                                                         320
                                                                        1);
                                                         321
                                                                  }
                                                        322
3238
                                                                                                                                                                                     BE Outline × □ E P2 × × 0 × 1 = □
                                                                  com.indium.bankingapp
                                                         324
                                                         325

→ Θ<sub>b</sub> BankingAppMain

                                                         326
                                                                                                                                                                                           * * accountService : AccountService
                                                                       List<Map.Entry<String, Long>> sortedAccountTypeCounts = accountTypeCounts.entrySe
    .sorted((entry1, entry2) -> entry2.getValue().compareTo(entry1.getValue()
    .collect(Collectors.toList());
                                                         327
                                                                                                                                                                                            " scanner : Scanner
                                                         328
                                                                                                                                                                                           " importCount : int
                                                         329
                                                         330
                                                                                                                                                                                           * <sup>5</sup> exportCount : int
                                                                        System.out.println("No of accounts by account type (sorted in descending order):"
sortedAccountTypeCounts.forEach(entry -> {
    System.out.println(entry.getKey() + ": " + entry.getValue());
}
                                                         331
                                                                                                                                                                                           main(String[]): void
                                                         332
                                                                                                                                                                                           createAccountService() : Account
                                                         333
                                                                                                                                                                                           " displayMenu(): void
                                                                        });
                                                         334
                                                         335
                                                                                                                                                                                           ■å getUserChoice(): int
                                                         336
                                                                                                                                                                                           👊 captureAccountDetails() : void
                                                         337*
                                                                   private static void printAvgBalanceByAccountType() {
                                                                                                                                                                                           👊 calculateInterestAndUpdateBalaı 🗸
                                                                       Map<String. Double> avgBalanceBvTvpe = accountService.getAllAccounts().stream()
                                                        338
```

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                                 □ 😸 🔛 🗎 🗈 BankingAppMain.java ×
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■ Package Explorer ×
                                                                                                                                                                                      v 3 bankingapp-with-impexp-stream-stats [inclium_javabo 336 337=
                                                               private static void printAvgBalanceByAccountType() {
  → M JRE System Library [JavaSE-17]
                                                                                                                                                                                           ► All ► Activate...
                                                      338
                                                                    Map<String, Double> avgBalanceByType = accountService.getAllAccounts().stream()
                                                                              .collect(Collectors.groupingBy(
                                                      339
                                                                                        E(Collectors.groupinger)
Account::getAccountType,
Collectors.averagingDouble(Account::getBalance)
     341
       BankingAppMain.java
                                                      342
                                                                              ));

→ m com.indium.bankingapp.model

                                                      343
        > Account.iava
                                                      344
                                                                    System.out.println("Average balance by account type:");

→ 

## com.indium.bankingapp.service

                                                                    avgBalanceByType.forEach((accountType, avgBalance) -> {
    System.out.println(accountType + ": " + avgBalance);
                                                      345
                                                      346
       > AccountService.java
                                                      347
       > AccountServiceHashMapImpl.java
                                                      348
                                                               }
                                                      349
                                                               private static void listAccountIdsByName() {
   try {
                                                      350
                                                      351
                                                                         System.out.print("Enter a name to search for: ");
String searchName = scanner.nextLine().toLowerCase();
                                                      352
353
                                                                                                                                                                            E Outline × □ E A N V • V 1 □ B
                                                      354
355

⊕ com.indium.bankingapp

                                                                         List<Account> accounts = new ArrayList<>(accountService.getAllAccounts());

✓ Ø<sub>ø</sub> BankingAppMain

                                                      356
                                                                         List<String> accountInfoWithName = new ArrayList<>(); // Change to store both
                                                                                                                                                                                  as accountService: AccountService
                                                      357
                                                                                                                                                                                  " scanner : Scanner
                                                                         for (Account account : accounts) {
                                                                              if (account.getName().toLowerCase().contains(searchName)) {
   String accountInfo = "Account ID: " + account.getId() + ", Account Ty
                                                                                                                                                                                  ° importCount : int
                                                      359
                                                      360
                                                                                                                                                                                  = 8 exportCount : int
                                                                                   accountInfoWithName.add(accountInfo);
                                                      361
                                                                                                                                                                                  • s main(String[]) : void
                                                      362
                                                                                                                                                                                  createAccountService() : Account
                                                      363
364
                                                                         }
                                                                                                                                                                                  displayMenu(): void
                                                                         if (!accountInfoWithName.isEmpty()) {
   System.out.println("Account IDs and Types with names containing '" + sear
   for (String accountInfo : accountInfoWithName) {
                                                      365
                                                                                                                                                                                  ■å getUserChoice(): int
                                                      366
                                                                                                                                                                                  =å captureAccountDetails() : void
                                                                                                                                                                                  ■å calculateInterestAndUpdateBalar 🗸
                                                      368
                                                                                   System.out.println(accountInfo):
```

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□ Package Explorer × □ 🙉 🐷 🖁 □ 🗓 BankingAppMain.java ×
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                                                                                                                                                                                              3 + | 3 % | > | × N ⊕ | 9 |
                                                                            if (!accountInfoWithName.isEmpty()) {
    System.out.println("Account IDs and Types with names containing '" + sear
    for (String accountInfo : accountInfoWithName) {
~ 🙀 bankingapp-with-impexp-stream-stats (indium_javabo 365
  → M JRE System Library [JavaSE-17]
                                                        366
                                                                                                                                                                                    Find
                                                                                                                                                                                                   • All • Activate...
  y ∰ src
                                                                                       System.out.println(accountInfo);
                                                        368

→ # com.indium.bankingapp

        > A Banking App Main. java
                                                                            } else {
                                                        370
                                                                                 System.out.println("No accounts found with names containing '" + searchNa

    # com.indium.bankingapp.model

                                                        372
        → Account.java
                                                                       } catch (Exception e) {
    System.err.println("An error occurred: " + e.getMessage());
                                                        373

→ # com.indium.bankingapp.service

                                                         374
        AccountService.java
                                                        375
                                                        376
377
        AccountServiceHashMapImpLjava
                                                                  private static synchronized void importAccounts() {
                                                                       try {
    System.out.print("Enter the path of the file to import from: ");
                                                        379
                                                        380
                                                                                                                                                                                    E Outline × □ E P2 × × □ × 8 = □
                                                        381
                                                                             String filePath = scanner.nextLine();
                                                        382
                                                                                                                                                                                       # com.indium.bankingapp
                                                                             // Created a thread to perform the import
Thread importThread = new Thread(() -> {
    BufferedReader reader = null;
                                                        383

▼ Ø<sub>6</sub> BankingAppMain

                                                        384
                                                        385
                                                                                                                                                                                          * * accountService : AccountService
                                                        386
                                                                                  try {
                                                                                                                                                                                          " scanner : Scanner
                                                                                        reader = new BufferedReader(new FileReader(filePath));
                                                                                                                                                                                          a * importCount : int
                                                                                       String line;
                                                        388
                                                                                                                                                                                          e exportCount : int
                                                                                       while ((line = reader.readLine()) != null) {
   String[] parts = line.split(",");
   if (parts.length == 5) {
     int id = Integer.parseInt(parts[0].trim());
}
                                                        390
                                                                                                                                                                                          • * main(String[]) : void
                                                        391
                                                                                                                                                                                          • * createAccountService() : Accoun
                                                        392
                                                                                                                                                                                          displayMenu(): void
                                                        393
                                                                                                                                                                                          ■å getUserChoice() : int
                                                         394
                                                                                                 String name = parts[1].trim();
double balance = Double.parseDouble(parts[2].trim());
                                                                                                                                                                                          ■å captureAccountDetails(): void
                                                        395
                                                                                                 double roi = Double.parseDouble(parts[3].trim());
                                                                                                                                                                                          📲 calculateInterestAndUpdateBalar 🗸
```

🔯 bankingapp-with-impexp-stream-stats - bankingapp-with-impexp-stream-stats/src/com/indium/bankingapp/BankingAppMain.java - Eclipse IDE Eile Edit Source Refactor Navigate Search Project Bun Window Help Q 18 8 8 □ 🕫 👂 🖁 🖶 🔟 🗷 BankingAppMain,java × □ Package Explorer × = 🗆 🛢 Task List × - 0 →

→ B bankingapp-with-impexp-stream-stats [indium_javabo] 377 → JRE System Library [JavaSE-17] 378= private static synchronized void importAccounts() { Find All Activate... 379 y ∰ src System.out.print("Enter the path of the file to import from: "); →

⊕ com.indium.bankingapp 381 String filePath = scanner.nextLine(); BankingAppMain.java 382 // Created a thread to perform the import
Thread importThread = new Thread(() -> {
 BufferedReader reader = null; # com.indium.bankingapp.model 383 384 Account.java 385 B com.indium.bankingapp.service try {
 reader = new BufferedReader(new FileReader(filePath)); 386 AccountService.java 387 AccountServiceHashMapImpl.java 388 String line; while ((line = reader.readLine()) != null) {
 String[] parts = line.split(",");
 if (parts.length == 5) {
 int id = Integer.parseInt(parts[0].trim());
} 390 391 392 을 Outline × 항 된 유 및 및 이 것 을 모 다 393 394 395 String name = parts[1].trim(); double balance = Double.parseDouble(parts[2].trim()); ▼ G BankingAppMain 396 double roi = Double.parseDouble(parts[3].trim()); * * accountService : AccountService 397 String type = parts[4].trim(); 398 * scanner : Scanner Account account = new Account(id, name, balance, roi, type); 399 " importCount : int 400 s exportCount : int. if (accountService.createAccount(account)) {
 importCount++; // Increment the count 491 • s main(String[]) : void 402 403 f createAccountService(): Account 404 } " displayMenu(): void 405 ■å getUserChoice() int } catch (IOException e) {
 System.err.println("Error reading from the file: " + e.getMessage());
} catch (NumberFormatException e) { 496 ■å captureAccountDetails() : void 407 👊 calculateInterestAndUpdateBalai 🗸 498

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→ Si bankingapp-with-impexp-stream-stats [indium_javabo 485]

                                                                                                                                  } catch (IOException e) {
    System.err.println("Error reading from the file: " + e.getMessage());
                                                                                         486
  > M JRE System Library [JavaSE-17]
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                                                                                                                                                                                                                                                                                                                         ► All ► Activate...
                                                                                                                                                                                                                                                                                                                                                         (3
                                                                                          497

→ B src

                                                                                                                                  } catch (NumberFormatException e) {
   System.err.println("Error parsing data from the file: " + e.getMessag
                                                                                          498

    B com.indium.bankingapp

                                                                                          409
                                                                                                                                  finally {
  if (reader != null) {
    try {
       reader.close();
    } catch (IOException e) {
             BankingAppMain.java
                                                                                          410
                                                                                          411

    # com.indium.bankingapp.model

                                                                                          412
             > Account.java
                                                                                          413

→ B com.indium.bankingapp.service

                                                                                          414
            AccountService.iava
                                                                                          415
                                                                                                                                                           e.printStackTrace();
                                                                                          416
            AccountServiceHashMapImpl.java
                                                                                          417
                                                                                                                                          }
                                                                                          418
                                                                                                                                  }
                                                                                          419
                                                                                                                          });
                                                                                          420
                                                                                          421
                                                                                                                            // Start the import thread
                                                                                                                                                                                                                                                                                                 BEOutline × ₩ E P N N N O N 1 = B
                                                                                                                           importThread.start();
                                                                                          422

⊞ com.indium.bankingapp

                                                                                                                           // Wait for the import thread to finish
importThread.join();
                                                                                          424

→ G BankingAppMain

                                                                                          425

• * accountService : AccountService

                                                                                          426
                                                                                                                                                                                                                                                                                                          * scanner : Scanner
                                                                                          427
                                                                                                                          System.out.println(importCount + " accounts imported successfully.");
                                                                                                                                                                                                                                                                                                          * importCount : int
                                                                                                                  } catch (Exception e) {
    System.err.println("An error occurred: " + e.getMessage());
                                                                                          428
                                                                                                                                                                                                                                                                                                          * exportCount : int
                                                                                          429
                                                                                          430
                                                                                                                                                                                                                                                                                                          • s main(String[]) : void
                                                                                          431
                                                                                                          }
                                                                                                                                                                                                                                                                                                          " createAccountService(): Account
                                                                                          432
                                                                                                                                                                                                                                                                                                          " displayMenu(): void
                                                                                          433-
                                                                                                          private static synchronized void exportAccounts() {
                                                                                          434
                                                                                                                                                                                                                                                                                                          • § getUserChoice() : int
                                                                                                                          System.out.print("Enter the path of the file to export to: ");
String filePath = scanner.nextLine();
                                                                                         435
436

    captureAccountDetails() : void

                                                                                                                                                                                                                                                                                                          👊 calculateInterestAndUpdateBalai 🗸
                                                                                          437
```

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                                                                                              account.getAccountType();
                                                                                                                              T account.gethot() T , T
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 ➤ M JRE System Library [JavaSE-17]
                                                                                                                                                                                     · All · Activat
                                                                                                                                                                        Find
                                                   450
                                                                                     writer.write(line);
                                                    451
 v # src
                                                    452
                                                                                     writer.newLine();
    🛩 🗯 com.indium.bankingapp
                                                    453
       BankingAppMain.java
                                                    454
                                                                                     exportCount++; // Increment the count

→ # com.indium.bankingapp.model

                                                    455
                                                                           } catch (IOException e) {
   System.err.println("Error writing to the file: " + e.getMessage());
       > Account.iava
                                                    456
                                                    457

    A com.indium.bankingapp.service

                                                    458
                                                                           } finally {
       AccountService.java
                                                                                if (writer != null) {
    try {
        writer.close();
}
                                                    459
       AccountServicel lashMapImpl.java
                                                    460
                                                    461
                                                                                     } catch (IOException e) {
    e.printStackTrace();
                                                    462
                                                    463
                                                    464
                                                                                     }
                                                                                                                                                                       B Outline × □ □ □ ⅓ 💘 💥 •
                                                    465
                                                                               }
                                                    466
                                                                           }
                                                                                                                                                                         # com.indium.bankingapp
                                                                      });
                                                    467

→ Θ<sub>B</sub> BankingAppMain

                                                                                                                                                                             * accountService : Accou
                                                                       // Start the export thread
exportThread.start();
                                                    469
                                                    470
                                                                                                                                                                            * scanner : Scanner
                                                    471
                                                                                                                                                                            * 5 importCount : int
                                                                       // Wait for the export thread to finish
exportThread.join();
                                                    472
                                                                                                                                                                            * s exportCount : int.
                                                    473
                                                                                                                                                                            • * main(String[]) : void
                                                    474
                                                                       System.out.println(exportCount + " accounts exported successfully.");
                                                                                                                                                                            6 createAccountService()
                                                    475
                                                                  } catch (Exception e) {
    System.err.println("An error occurred: " + e.getMessage());
                                                    476
                                                                                                                                                                            displayMenu(): void
                                                    477
478
                                                                                                                                                                             ■å getUserChoice(): int
                                                                  }
                                                                                                                                                                             captureAccountDetails
                                                    479
                                                             }
```