

AP Comp Sci Programming Assignments for Ch.6 – File IO in Java.

Program 6_01(Timeline). Who was alive when? Read the datafile scidata.txt and display the scientist's name on a timeline according to when he/she was alive. For example, take the 80 column output line and display the years from 1400 to 1950.

```
1400          1500          1600          1700          1800          1900
 | . . . . | . . . . | . . . . | . . . . | . . . . | . . . . | . . . . | . . . . |
          Copernicus
                    Kepler
                  Galileo
```

Program 6_02(BasketballTryoutStats). What are the player ratings? Use the same ratings as the previous basketball tryout program. Printout a list with column headings and a total rating at the end of each row.

Program 6_03(Customer Accounts). Write a program that reads the bizdata file character by character. The customer data on file is a looks like this:

```
123A7Smith,John234157$500.00
```

for each customer. What we have is a customer number, a name, an account number, and an outstanding balance followed by a space. Then the same data appears again for the next customer and so on. All customer numbers are 5 characters and all account numbers are 6 characters. Create 4 arrays of string and separate the data to fill each array. You will have a customer number array, a customer name array, an account number array, and an outstanding balance array. Print-out a report of what is on file according to the following format:

```
Id. No: 123A7
Customer: Smith, John
Acc. #234157
Balance: $500.00
```

Program 6_04(Test Corrector). Write a program that reads the mctstdata file. It contains the answers to a 25-item multiple-choice test given to a number of students. The key is in the last line of the file. Correct each students test and assign a letter grade according to the following: 90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, and below 60 = F. Printout a list with column headings of Student Name, Number Correct, and Letter Grade.

Program6_05(DVDSearch). Write a program that reads the DVDdata file and allows the user to perform queries on movie titles, genres, directors, ratings, runtime, and availability.

Program6_06(FileDataTransfer). Write a program that transfers the data from the single line in the bizdata file to another file called bizdata2, in line by line format. For example, change the data from the single line in bizdata that looks like this:

123A7Smith,John234157\$500.00 634B4Wilson,James390832\$1000.00 387K2James,Alice301253\$75.00...

to this:

123A7Smith,John234157\$500.00
634B4Wilson,James390832\$1000.00
387K2James,Alice301253\$75.00
and so on...

Program6_07(ToolInventory). Write a program that accepts Tool Inventory data from the keyboard and stores it in a file called "toolinv.txt". The program should ask you for the number of different tools that you want to store, and then asks for the tool name, part number, the wholesale value, and the retail value. This data should be stored on the file as separate strings of data as shown below:

clawhammer452W67\$45.98\$87.95
hexdrillbit617H72\$17.95\$39.99
bandsawblade361B61\$87.96\$175.89
and so on...

6_08(BusinessAccountsII). Using the data file from Program 6_06, bizdata2.txt, print-out a report of the contents of the file and the total money owed to the company by all the customers put together.

Program6_09(ToolInventoryII). In a similar manner as you did in Program 6_08, print-out a report of all the tools in the inventory with the total of the wholesale value and a total of the retail value. Subtract these two numbers to give a total projected profit on the sale of all the tools.

(More details will be given later for the rest of the assignments.)