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CS 1401

Lab 9

**Video Game**

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| **Video Game** |
| - name  - price  -numberSold  -typeOfGame |
| + setName(): void  + setPrice(): void  + setNumberSold(): void  + setTypeOfGame: void  + getName(): String name  + getPrice(): double price  + getNumberSold(): int numberSold  + getTypeOfGame(): String typeOfGame  + Print(): void |

Class VideoGame contains methods for setting and getting four variables as well as a method that prints a statement as well as the variables.

**MyStoreManager**

Pseudocode **readFromFile(String fileName)**

1. Set up fileReader to scan from fileName
2. While (scanner has next)
   1. Scan next
   2. ++ counter
3. Close scanner
4. Reinitialize scanner
5. Create an array of type VideoGame and length of counter / 4
6. For (i = 0; i < counter / 4; ++i)
   1. Construct initialized video game object at array[i]
   2. Set name to next line
   3. Set price to next line
   4. Set numberSold to next line
   5. Set typeOfGame to next line
7. Close scanner
8. Give array

Pseudocode **sortBySold(VideoGame[] myVideoGames)**

1. for (i = 0; i < myVideoGames.length; ++i)
   1. for (j = i + 1; j < myVideoGames.length; ++j)
      1. if myVideoGames[j] numberSold is greater than myVideoGames[i] numberSold
         1. temp 🡨 myVideoGames[i]
         2. myVideoGames[i] 🡨 myVideoGames[j]
         3. myVideoGames[j] 🡨 temp

Pseudocode **sortByPrice(VideoGame[] myVideoGames)**

1. for (i = 0; i < myVideoGames.length; ++i)
   1. for (j = i + 1; j < myVideoGames.length; ++j)
      1. if myVideoGames[j] price is greater than myVideoGames[i] price
         1. temp 🡨 myVideoGames[i]
         2. myVideoGames[i] 🡨 myVideoGames[j]
         3. myVideoGames[j] 🡨 temp

Pseudocode **sortByType(VideoGame[] myVideoGames)**

1. for (i = 0; i < myVideoGames.length; ++i)
   1. for (j = i + 1; j < myVideoGames.length; ++j)
      1. if myVideoGame[j] typeOfGame compared to myVideoGame[i] typeOfGame is less than 0
         1. temp 🡨 myVideoGames[i]
         2. myVideoGames[i] 🡨 myVideoGames[j]
         3. myVideoGames[j] 🡨 temp

Pseudocode **totalSales(VideoGame[] myVideoGame)**

1. for (i = 0; i < myVideoGame.length; ++i)
   1. total 🡨 total + (myVideoGame[i] price \* myVideoGame[i] numberSold
2. give total

Pseudocode **lottery(VideoGame[] myVideoGame)**

1. create random number generator
2. give myVideoGame[random number between 0 and myVideoGame.length – 1]

Pseudocode **MAIN METHOD**

1. Ask user to enter the name of a file
2. fileName 🡨 entered value
3. VideoGame[] games 🡨 **readFromFile(**fileName**)**
4. Ask user to enter which method the want to use
5. Choice 🡨entered value
6. Switch (choice) { 🡨 while (choice is between 0 and 5)
   1. Case 1:
      1. **sortBySold(**games**)**
      2. print “best selling video game”
      3. give games[0] name
      4. give games[0] numberSold
   2. Case 2:
      1. **sortByPrice(**games**)**
      2. print “game with lowest price”
      3. give games[games.length – 1] name
      4. give games[games.length – 1] price
   3. Case 3:
      1. **sortByType(**games**)**
      2. count 🡨1
      3. print “list of games by type”
      4. for (i = 0; i < games.length; ++i)
         1. if ( i equals games.length – 1)
            1. give games[i] typeOfGame + count
         2. else if (games[i] typeOfGame equals games[i + 1] typeOfGame)
            1. ++count
         3. else
            1. give games[i] typeOfGame + count
            2. count 🡨1
   4. Case 4:
      1. print “total sales”
      2. give **totalSales(**games**)**
   5. Case 5:
      1. print “lottery”
      2. print “lottery description: “
      3. **lottery(**games**)**.**Print()**
   6. Default:
      1. Print “exiting…”