**Soft 6007: Problem Solving & Programming Group Assignment**

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**Data Dictionary**

|  |  |  |  |
| --- | --- | --- | --- |
| Identifier | Type | Description | Variable/Constant |
| name | String | User’s name | Variable |
| phone | String | User’s phone number | Variable |
| numItems | int | Number of items ordered | Variable |
| title | String | Title of item ordered | Variable |
| format | int | Format of ordered item | Variable |
| price | double | Price of item ordered | Variable |
| totalPrice | double | Total price of items ordered | Variable |
| orderDetails | String | Order details | Variable |
| cdTotal | double | Total price of cds ordered | Variable |
| cdNum | int | Number of cds ordered | Variable |
| lpTotal | double | Total price of cds ordered | Variable |
| lpNum | int | Number of lps ordered | Variable |
| csTotal | double | Total price of cassettes ordered | Variable |
| csNum | int | Number of cassettes ordered | Variable |
| itemFormat | String | Format chosen by user | Variable |
| maxPrice | double | Highest price of user’s items. | Variable |
| maxItem | String | Highest priced item ordered by user | Variable |
| maxItemFormat | String | Highest priced item format | Variable |
| orderNumber | String | Order number generated. | Variable |
| cdAverage | double | Average price of cds ordered | Variable |
| lpAverage | double | Average price of lps ordered. | Variable |
| csAverage | double | Average price of cs ordered. | Variable |
| randomNumber | int | Random number for order number | Variable |
| phoneLength | int | For calculating orderNumber | Variable |

Algorithim

* Prompt for and read in name.
* Prompt for and read in user’s phone.
* Prompt for and read in numItems.
  + Validate input.
* Iterate numItems using for loop.
  + Prompt for and read in title.
  + Prompt for and read in format.
  + Prompt for and read in price
  + Using if statements update cdTotal or lpTotal or csTotal & cdNum or lpNum or csNum.
  + Append title, item format and price to order details.
  + Using if statement, keep record of maxPrice and maxItem.
* Generate orderNumber using first two letters of user’s name (charAt method), last four digits of phone (charLength method) & random integer (math.random) from 10-99.
* Calculate format average prices.
* Print out order details to console.