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CSC 330 – Object Oriented Programming

 Project #02 – Newspaper Delivery System –

 Phase 3 (Test Plan) Due Date: 05/04/2019

Test Plan

It is crucial that we run many different tests for our Newspaper Delivery System in order to ensure that the program runs without any bugs or errors while being used. We will run a number of tests for each class to make sure they each function properly, and fulfill their responsibility. The classes we test are household, carrier, and data handler.

Class Publication:

Class household is used to store information about each house that is imported from the data set that is utilized. The information that is stored is name of the person, the address, the phone number, whether or not the persons delivery is suspended, a list of subscriptions that the house has, the total amount of money the house owes between all subscriptions, and the total number of subscriptions it has. We will want to ensure that each data member is correctly inputted and that it can also be retrieved correctly using a number of get and set functions for each data.

The test plan for this class covers the following items:

1. Setting each data member correctly, making sure they are the correct types
2. Getting each data member correctly
3. Ability to manipulate the list to use its functions (adding, removing)

 Test Setup:

Initialize a new household with default constructor
Initialize a new household with one parameter
Initialize a new household with all the parameters
Test Output/Input of data members
Add/Remove from the list
Displaying the entire list

Test Specification:

We run each one of those tests to make sure each function and constructor works without any problems, so we can ensure that when they are utilized in relation to other classes we will not run into any bugs.

Class Carrier:

Class carrier is used to store each carriers name, address, and phone number. It is also used to store a list of households that the carrier delivers to. We need to ensure all data is imported corresponding correctly to its data member, and we can use the accessor and mutator methods in other functions.

The test plan for this class covers the following items:

1. Setting each data member correctly, making sure they are the correct types
2. Getting each data member correctly

Test Setup:

Initialize a new carrier with default constructor
Initialize a new carrier with one parameter
Initialize a new carrier with all the parameters
Test Output/Input of data members

Test Specification:

We run each one of those tests to make sure each function and constructor works without any problems, so we can ensure that when they are utilized in relation to other classes we will not run into any bugs.

Class Data-Handler:

Class data-handler does not have any data members, as it serves a purpose of importing data from our .csv data set. We have multiple functions that each serve a purpose of importing different data sets that correspond to the publication, carrier, and household class. Each function utilizes a local variable to assist with importing data.

The test plan for this class covers the following items:

1. Importing each set of the data into the list
2. Ensuring the full list is imported
3. Allowing each data member from each list to be accessed

Test Setup:

Create a 3 list of objects from each class
Call each data import function corresponding to each class
Output the number of objects in the list
Display each list of objects

Test Specification:

We ran each one of those tests to make sure that the data is imported correctly, and efficiently, as the whole program depends on this data being imported. As a result of this data test being successful, it will allow the other classes to utilize the data members using different methods while the program is running.