Design Document

Methods and Tools in SW Development

**I. Group Information**

Group Number: Section 501

Group Member Names and NetIDs:

* Madison Bailey
  + mbb496
* Jeffery Burns
  + not available
* Caleb Germany
  + not available
* Molly Granger
  + mmg423
* Spencer Hall
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* Caleb Hickman-Thomas
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Our group decided on four base classes: customer, product, cart, and store. We broke three of these classes down into one or two derived classes; we felt this would lead to easier management of the data, as well as aid in development and testing of the software and databases

**Customer** – *base class* – will only include basic customer information

**Payment Info** – *derived class* – will include everything required to make a purchase

**Shipping Info** – *derived class* – will include everything required to ship an order

**Product** – *base class* – will only include basic product information shared by all product types

**Book** – *derived class* – will include information related to books

**Game** – *derived class* – will include information related to video games

**Cart** – *base class* – used to track items in customers’ carts

**Order** – *base class* – used to track individual orders

**Store** – *base class* – used to track business-related information about the store

**II. Detailed Class Diagrams**

|  |
| --- |
| Customer |
| ***Customer ID \*\****  Email  Password  First name  Last name |
| functions |

* Function 1 – explanation
* Function 2 – explanation

|  |
| --- |
| Product |
| # inventory\_ID : int  # type: string  # price : float  # quantity : int |
| + Product() :  + ~Product() :  + add\_quantity()  + remove\_quantity() |

* Function 1 – explanation
* Function 2 – explanation

|  |
| --- |
| Book |
| - title : string  - author : string  - year : int  - publisher : string  - genre : string |
| functions |

* Function 1 – explanation
* Function 2 – explanation

|  |
| --- |
| Games |
| - title : string  - publisher : string  - year : int  - genre : string  - platform : string |
| functions |

* Function 1 – explanation
* Function 2 – explanation

**III. Menu Information**

Before login:

* Login
* Create Account
* Exit Program

After login:

* View Account
  + Go Back
  + Edit Account
* Search
* Cart Information
  + Go back
  + View Cart
  + Remove Item from Cart
  + …
* …
* Exit Program

Does your menu cover all requirements given? If not, explain why certain requirements don’t have a distinct menu option?

<answer me!>

**IV. Information Storage**

How is your group storing information? database

Include one of these lines of questioning based on your storage schema:

* If a database, what kind of database? a relational database that uses SQL, specifically SQLite3 with Python3.
  + How many database tables will you have?

What information are you going to store in each (table / file depending on schema)?

*Sample Answer:*

* *Customers*
  + *First name*
  + *Last name*
  + *Username*
  + *Password*
  + *…*
* *Payment Info*
* *Shipping Info*
* *Products*
* *Books*
* *Games*
* *Cart*
* *Order*
* *Store*
  + *Item ID*
  + *…*