**Group 37 Part 1**

**Member Variables: Garrett N. Shuman, Max Falkenstein, Mitch Gilchrist, Jimmy Conway**

**Submit a doc/docx document including the design along with UML diagrams (Class diagrams, activity diagrams, etc.). Also, please include the following:**

* **All classes (with member attributes and member functions)**
* **What are class hierarchies and relationships?**
* **All other data structures or files to be used**

**Github Link:** [**https://github.iu.edu/mggilchr/C212-Spring-2018**](https://github.iu.edu/mggilchr/C212-Spring-2018)

**Classes:**

**// Constructors are not noted below but will be implemented in each class**

**Manager:**

**Attributes:**

* **String ID**
* **int Password**
* **String Name**

**Functions:**

* **Change server’s password - public void changeServerPassword(int n)**
* **add server - public void addServer(ArrayList s)**
* **deleter server - public void deleteServer(ArrayList s)**
* **Apply discount - public double applyDiscount(int n) //return new total**
* **Modify order - public void changeOrder(Order o)**

**Login:**

**Attributes:**

* **String ID**
* **Int Password**
* **File Login.txt (Save user names and passwords)**

**Functions:**

* **Add user - public void addUser(String ID, int p)**
* **Public void Login()**
* **Delete user - - public void deleteUser(String ID, int p)**

**Server:**

**Attributes:**

* **String ID**
* **Int Password**
* **String Name**

**Functions:**

* **View previous tables - public void viewPreviousTables()**
* **Create table (up to four customers)**
* **Place order - public void placeOrder()**

**Tables:**

**Attributes:**

* **Table Number (4 seats)**
* **Private int numPeople**

**Functions:**

* **isOccupied (tells is table is empty)**

**Menu:**

**Attributes:**

* **String name**
* **Double price**

**Order (FOOD):**

**Attributes:**

* **Entrees (String ArrayList)**
* **Sides (String ArrayList)**

**Functions:**

* **Public void Add Entree (String s)**
* **Public void Add Side (String s)**
* **Public void Delete Entree (String s)**
* **Public void Delete Side (String s)**

**Payment (Receipt):**

**Attributes:**

* **Double tax**
* **Double gratuity**
* **Double subtotal**
* **Double total**
* **String paymentType**

**Functions:**

* **Public void calculate subtotal()**
* **Public void calculate tax()**
* **Public void calculate Gratuity()**
* **Public void calculate Total()**
* **Public String toString()**
* **Public void getPaymentType()**

**Main:**

**Attributes:**

* **ArrayList<Server>**
* **ArrayList<Manager>**

**Functions:**

* **Main()**

**Relationships:**

**Payment depends on Order**

**Order aggregates the Menu class**

**Login is a inheritance(the interface) class of Server, Manager**

**Server class aggregates a Table class**

**Other Data Structures:**

* **ArrayList**
* **Array**