## **Conceptual Classes**

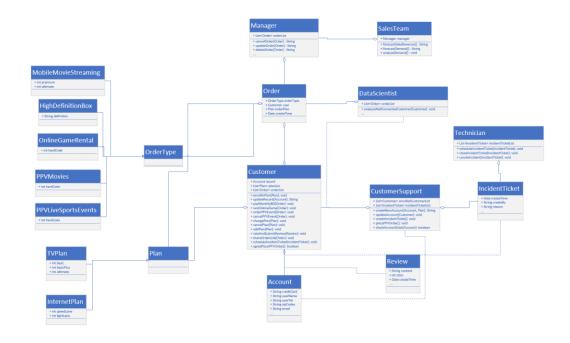
| Class             | Descriptio      | Attribute            | Method |
|-------------------|-----------------|----------------------|--------|
|                   | n               |                      |        |
| OrderType         | This is a super |                      |        |
|                   | class, which    |                      |        |
|                   | represents      |                      |        |
|                   | what kind of    |                      |        |
|                   | order the user  |                      |        |
|                   | has paid.       |                      |        |
| MobileMovieStrea  | This is a       | 1. int premium       |        |
| ming              | subclass of the | 2. int ultimate      |        |
|                   | "OrderType"     |                      |        |
|                   | class, which    |                      |        |
|                   | represents that |                      |        |
|                   | the user has    |                      |        |
|                   | paid an order   |                      |        |
|                   | of the type     |                      |        |
|                   | "Mobile Movie   |                      |        |
|                   | Streaming".     |                      |        |
| HighDefinitionBox | This is a       | 1. String definition |        |
|                   | subclass of the |                      |        |
|                   | "OrderType"     |                      |        |
|                   | class, which    |                      |        |
|                   | represents that |                      |        |
|                   | the user has    |                      |        |
|                   | paid an order   |                      |        |
|                   | of the type     |                      |        |
|                   | "High           |                      |        |
|                   | Definition      |                      |        |
|                   | Box".           |                      |        |
| OnlineGameRental  | This is a       | 1. int hardCode      |        |
|                   | subclass of the |                      |        |
|                   | "OrderType"     |                      |        |
|                   | class, which    |                      |        |
|                   | represents that |                      |        |
|                   | the user has    |                      |        |
|                   | paid an order   |                      |        |
|                   | of the type     |                      |        |

|                    | "Online Come    |                     |  |
|--------------------|-----------------|---------------------|--|
|                    | "Online Game    |                     |  |
|                    | Rental".        |                     |  |
| PPVMovies          | This is a       | 1. int hardCode     |  |
|                    | subclass of the |                     |  |
|                    | "OrderType"     |                     |  |
|                    | class, which    |                     |  |
|                    | represents that |                     |  |
|                    | the user has    |                     |  |
|                    | paid an order   |                     |  |
|                    | of the type     |                     |  |
|                    | "PPV Movies".   |                     |  |
| PPVLiveSportsEvent | This is a       | 1. int hardCode     |  |
| S                  | subclass of the |                     |  |
|                    | "OrderType"     |                     |  |
|                    | class, which    |                     |  |
|                    | represents that |                     |  |
|                    | the user has    |                     |  |
|                    | paid an order   |                     |  |
|                    | of the type     |                     |  |
|                    | "PPV Live       |                     |  |
|                    | Sports Events". |                     |  |
| Plan               | This is a super |                     |  |
|                    | class, which    |                     |  |
|                    | represents      |                     |  |
|                    | what kind of    |                     |  |
|                    | plan the user   |                     |  |
|                    | has paid.       |                     |  |
| TVPlan             | This is a       | 1. int basic        |  |
|                    | subclass of the | 2. int basicPlus    |  |
|                    | "Plan" class,   | 3. int ultimate     |  |
|                    | which           |                     |  |
|                    | represents that |                     |  |
|                    | the user has    |                     |  |
|                    | paid an plan of |                     |  |
|                    | the type "TV    |                     |  |
|                    | Plan".          |                     |  |
| InternetPlan       | This is a       | 1. int speedLane    |  |
| michierran         | subclass of the | 2. int lightLane    |  |
|                    | "Plan" class,   | Z. IIII IIBIIILAIIE |  |
|                    | which           |                     |  |
|                    | represents that |                     |  |
|                    |                 |                     |  |
|                    | the user has    |                     |  |
|                    | paid an plan of |                     |  |
|                    | the type        |                     |  |

|               | "Internet      |                         |   |
|---------------|----------------|-------------------------|---|
|               | Plan".         |                         |   |
| Manager       | This class     | 1. List <order></order> | 1. cancelOrder(Order) : String          |
|               | contains       | orderList               | 2. updateOrder(Order) : String          |
|               | information    |                         | 3. deleteOrder(Order) : String          |
|               | about the role |                         |   |
|               | Manager.       |                         |   |
| Order         | This class     | 1. OrderType            |   |
|               | contains the   | orderType               |   |
|               | details of     | 2. Customer user        |   |
|               | order.         | 3. Plan orderPlan       |   |
|               |                | 4. Date                 |   |
|               |                | createTime              |   |
| Customer      | This class     | 1. Account record       | 1. enrollinPlan(Plan): void             |
|               | contains       | 2. List <plan></plan>   | 2. updateRecord(Account): String        |
|               | information    | planList                | 3. payMonthlyBill(Order): void          |
|               | about the role | 3. List <order></order> | 4. rentOnlineGame(Order): void          |
|               | Customer.      | orderList               | 5. orderPPVEvent(Order): void           |
|               |                |                         | 6. cancelPPVEvent(Order): void          |
|               |                |                         | 7. changePlan(Plan): void               |
|               |                |                         | 8. cancelPlan(Plan): void               |
|               |                |                         | 9. addPlan(Plan): void                  |
|               |                |                         | 10. rateAndSubmitReview(Review): void   |
|               |                |                         | 11. shareOrderLink(Order): void         |
|               |                |                         | 12. scheduleIncidentTicket(IncidentTick |
|               |                |                         | et): void                               |
|               |                |                         | 13. agreePlacePPVOrder(): boolean       |
| Account       | This class     | 1. String               |   |
|               | contains       | creditCard              |   |
|               | information    | 2. String               |   |
|               | about the role | userName                |   |
|               | Account.       | 3. String userTel       |   |
|               |                | 4. String zipCodes      |   |
|               |                | 5. String email         |   |
| SalesTeam     | This class     | 1. Manager              | 1. forecastSalesRevenue(): String       |
|               | contains       | manager                 | 2. forecastDemand(): String             |
|               | information    |                         | 3. analyzeDemand() : void               |
|               | about the role |                         |   |
|               | SalesTeam.     |                         |   |
| DataScientist | This class     | 1. List <order></order> | 1. analyzeWellConnectedCustomer(Cus     |
|               | contains       | orderList               | tomer): void                            |
|               | information    |                         |   |
|               | about the role |                         |   |

|                 | DataScientist.  |   |   |
|-----------------|-----------------|---|---|
| CustomerSupport | This class      | 1. List <customer></customer>   | 1. createNewAccount(Account, Plan):     |
|                 | contains        | enrolledCustomerL   | String                                  |
|                 | information     | ist   | 2. updateAccount(Customer): void        |
|                 | about the role  | 2. List <incidenttic< td=""><td>3. createIncidentTicket(): void</td></incidenttic<>         | 3. createIncidentTicket(): void         |
|                 | CustomerSupp    | ket>  | 4. placePPVOrder(): void                |
|                 | ort.            | incidentTicketList  | 5. checkAccountExist(Account):          |
|                 |                 |   | boolean                                 |
| Review          | This class      | 1. String content   |   |
|                 | contains the    | 2. int stars  |   |
|                 | customer's      | 3. Date   |   |
|                 | evaluation of   | createTime  |   |
|                 | the service.    |   |   |
| Technician      | This class      | 1. List <incidenttic< td=""><td>1. scheduleIncidentTicket(IncidentTicke</td></incidenttic<> | 1. scheduleIncidentTicket(IncidentTicke |
|                 | contains        | ket>  | t): void                                |
|                 | information     | incidentTicketList  | 2. closeIncidentTicket(IncidentTicket): |
|                 | about the role  |   | void                                    |
|                 | Technician.     |   | 3. cancleIncident(IncidentTicket): void |
| IncidentTicket  | This class      | 1. Date   |   |
|                 | represents      | createTime  |   |
|                 | information     | 2. String createBy  |   |
|                 | about the       | 3. String reason  |   |
|                 | incident ticket |   |   |
|                 | created for     |   |   |
|                 | customer.       |   |   |

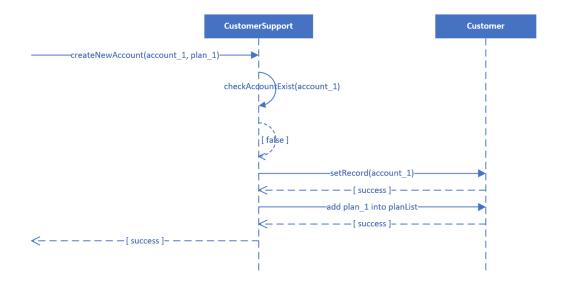
#### **Analysis class diagram**



### **Sequence Interaction Diagrams**

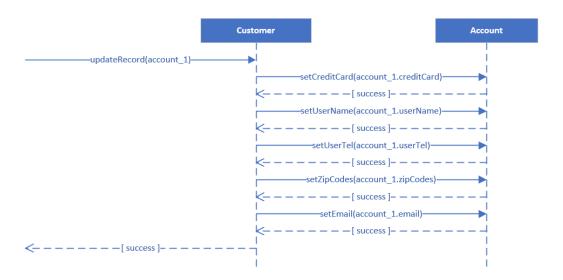
1. Use Case "Create Customer Account" at role "Customer Support".

Note: "account\_1" contains the basic information for the customer that needs to be created, such as creditCard, userName, userTel, and so on.

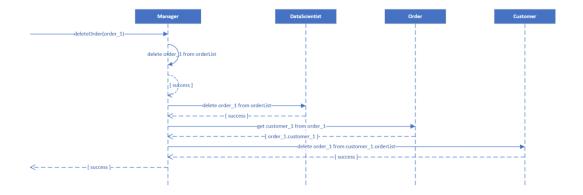


2. Use Case "Update Record" at role "Customer".

Note: "account\_1" contains the basic information for the customer that needs to be updated, such as creditCard, userName, userTel, and so on.

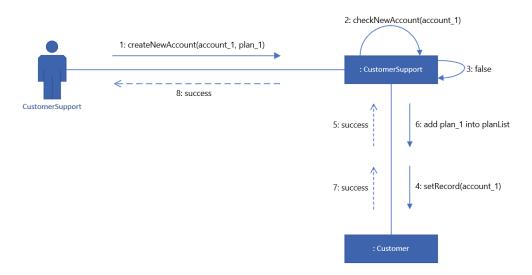


3. Use Case "Delete Order" at role "Manager".

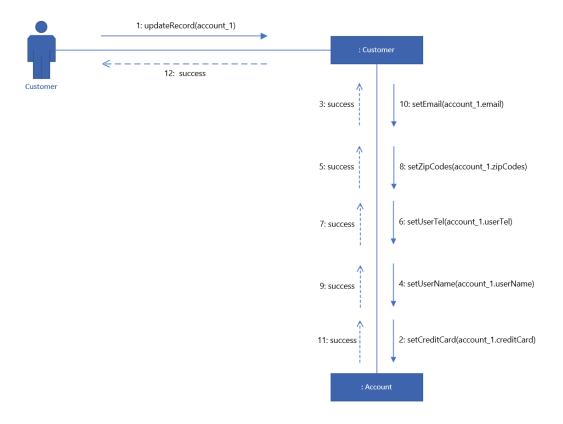


# **Communication Interaction Diagrams**

1. Use Case "Create Customer Account" at role "Customer Support".



2. Use Case "Update Record" at role "Customer".



#### 3. Use Case "Delete Order" at role "Manager".

