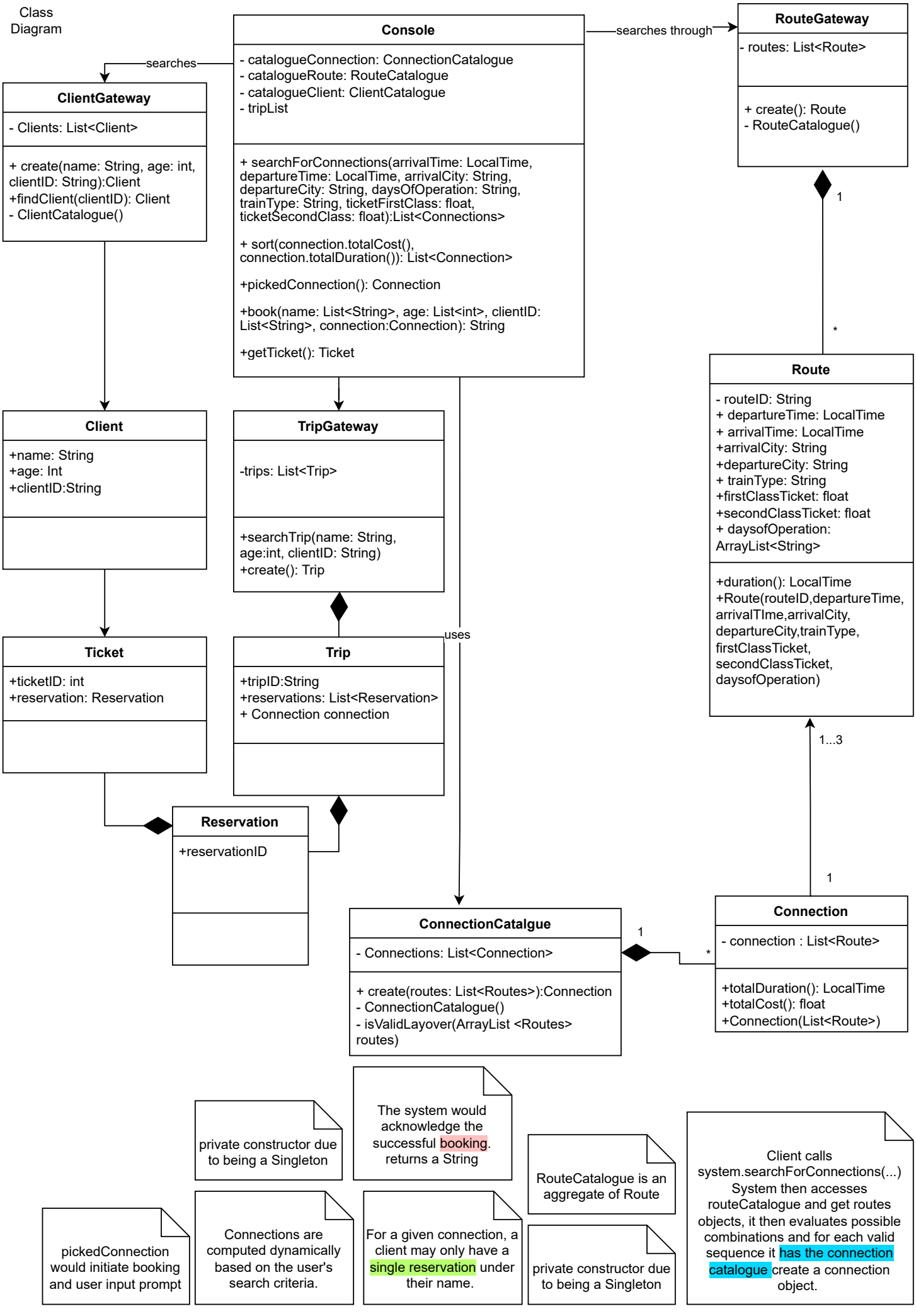
Class Diagram
Console
- catalogueConnection: ConnectionCatalogue
- catalogueRoute: RouteCatalogue
- catalogueClient: ClientCatalogue
- tripList
+ searchForConnections(arrivalTime: LocalTime, departureTime: LocalTime, arrivalCity: String, departureCity: String, daysOfOperation: String, trainType: String, ticketFirstClass: float, ticketSecondClass: float):List<Connections>
+ sort(connection.totalCost(), connection.totalDuration()): List<Connection>
+pickedConnection(): Connection
+book(name: List<String>, age: List<int>, clientID: List<String>, connection:Connection): String
+getTicket(): Ticket
searches through
RouteGateway
- routes: List<Route>
+ create(): Route
- RouteCatalogue()
searches
ClientGateway
- Clients: List<Client>
+ create(name: String, age: int, clientID: String):Client
+findClient(clientID): Client
- ClientCatalogue()
1
*
Client
+name: String
+age: Int
+clientID:String
TripGateway
-trips: List<Trip>
+searchTrip(name: String, age:int, clientID: String)
+create(): Trip
Route
- routeID: String
+ departureTime: LocalTime
+ arrivalTime: LocalTime
+arrivalCity: String
+departureCity: String
+ trainType: String
+firstClassTicket: float
+secondClassTicket: float
+ daysofOperation: ArrayList<String>
+duration(): LocalTime
+Route(routeID,departureTime, arrivalTIme,arrivalCity, departureCity,trainType, firstClassTicket, secondClassTicket, daysofOperation)
Ticket
+ticketID: int
+reservation: Reservation
Trip
+tripID:String
+reservations: List<Reservation>
+ Connection connection
uses
1...3
Reservation
+reservationID
1
ConnectionCatalgue
- Connections: List<Connection>
+ create(routes: List<Routes>):Connection
- ConnectionCatalogue()
- isValidLayover(ArrayList <Routes> routes)
1
*
Connection
- connection : List<Route>
+totalDuration(): LocalTime
+totalCost(): float
+Connection(List<Route>)
private constructor due to being a Singleton
The system would acknowledge the successful booking. returns a String
RouteCatalogue is an aggregate of Route
Client calls system.searchForConnections(...) System then accesses routeCatalogue and get routes objects, it then evaluates possible combinations and for each valid sequence it has the connection catalogue create a connection object.
pickedConnection would initiate booking and user input prompt
Connections are computed dynamically based on the user's search criteria.
For a given connection, a client may only have a single reservation under their name.
private constructor due to being a Singleton