DRIVING REGISTRATION SYSTEM

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We are designing an online driver registration and license records program. This system would allow drivers to login online and apply for new / renew driving permits. Also, old drivers would be able to access their driving fine history, past licenses and insurance data about their vehicles. Also, the driving office tellers would be able to input, update and retrieve driver info and ensure the integrity consistency of the data.

For this, we would recommend a layered architecture including:

* Database
* Data Control and Validation
* User Interface – Both Client and Teller – Web Based
* Session Manager

The Users would login to the system with assigned credentials and the Session manager would validate the login and assign session details to each logged in user valid for a specific period of time. Once the session expires, the user will be automatically logged out.

Any actions performed for example input, edit and retrieve data, the call is made to the Data Validation and Control layer which will validate the call. If the call is to input or edit, the data is validated to match the domains and requirements in the database and business rules. If the call is to retrieve, the data control will retrieve data from the database based on the selection criteria.

The Database returns the data and sends back to the data control layer which then sends it to the user that displays it on the UI.

The system would also alert clients and tellers of overdue fines and premiums that are pending for a client, also if a driving license is expired and reminders for an appointment date.

The Tellers would be able to retrieve/add/edit clients, fines, appointments, insurances and fines for clients.

The clients themselves would only be able to request new appointments, pay fines, premiums and check their balance and driving history.

For this, we would recommend the waterfall model as the domain for the business is wide and has many different validations to be done. Also, there are multiple types of users each with their own perspective and requirements which would require a lot of documentation and consistency to maintain.

Classes Involved:

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| --- | --- | --- | --- |
| Class Name | Purpose | Attributes | Operations |
| DrivingLicence | Holds clients driving license info | License type  License number  Dob  Driving Points  Class level  Expiry date  Restrictions |  |
| Client | Applicant applying for any service from the system | ID  Name  Dob  City  Age  Nationality  GovernmentID  AssessmentCount  Email  Address  Phone  Insurance Plan  Applicaition  Vehicles  ClientAccount |  |
| ClientAccount | Store clients driving history, appointments and links with the rest of system | Clientid  Account number  Fines  Balance  Fine History  Points History  Appointments  Registered Vehicles  OnlineAccount |  |
| ClientOnlineAccount | Allow client to access applciations online, view statuses, and history of driving.  Also pay fines and request appointments | Client\_ID  Id\_number  Password  Username  Email  Phone |  |
| Appointment | Appointment for tests, renewals and issues | Appointment\_date  Venue  Type  Requirements  Set\_date |  |
| DrivingAssessments | Knowledge or practical driving tests | AssessmentType  Level  Appointment  Examiner |  |
| Employee (Teller) | Interacts with clients to set up, and receives information from clients and kind of service | Name  Desgination |  |
| Vehicle | Hold information for vehicles registered under the client | Type  Make  Model  VIN  Engine number  InsurancePlan |  |
| InsurancePlan | Type of insurance for a vehicle | Liability  Coverage  Premium  Vehicle  Client  Plate Number  Duration |  |
| Fine | Information about client fines | FineType  Charge  Date  Deducted Points  IssuingOfficer  Location  Description  DueDate  Dispute |  |
| LicenceApplciations |  | LicenceLevel  ClientAccount  Date  Eligibility |  |