Fall 2017

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Issue** | **Description** | **Author** |
| December 6, 2017 | 1.0 | Initial working document | Swerve |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Table of Contents

[Potential Entity Classes 4](#_Toc500346583)

[Classes Attributes 5](#_Toc500346584)

[Entity Class Diagram 10](#_Toc500346585)

# Potential Entity Classes

|  |  |
| --- | --- |
| **Classes** | **Brief Description** |
| Patient Account | Hold physical info on the patient, along with payment info, credentials, the physician serving them, appointments scheduled and transaction history. |
| Appointment | An instance in time linked to a physician and a patient, the multiple appointments are organized in the schedule class. A patient will have multiple appointments and a Physician will have multiple appointments. |
| Registration Form | Creates and populates patient profile with information they provide, can have new attributes added by Physician or Admin. |
| Physician Account | Contains a name and physician credentials, is able to create and assign exercises, along with assign rehab plans, change them, view reports and close patient cases. |
| Admin Account | A class to hold the admins credentials, and performs changes to user accounts. |
| Rehab Plan | Standard rehab plans that have exercises serve as base templates for custom to be built off of. Can be assigned to a patient profiles by the physician. |
| Exercise | Actions prescribed by physicians used to make up plan, includes visuals that demonstrate the exercise. |
| Assessment Test | Data that pertains to the patient and tests they undergo, assigned and customized by physicians. |
| Progress Report | Contains data that pertains to the patient's recovery, relates current assessment to previous ones to show improvement. |
| Schedule | Composed of a set of appointments booked, each physician will have their own schedule, the clinic will have a schedule of all appointments, and each patient will have their own schedule. |
| Transaction | Billing, payment method, account info, payment credentials, patientID, created by the patient or an admin. |
| Base Account | All account types {admin, physician, patient} inherit from this abstract account.  Accounts hold a name, email, username and password. |
| Template Form | The form that holds the questions that the user will fill out. May be guided by the physician. |
| Exercises in Plans | The subset of exercises that are taken into one Rehab Plan. |
| Name | Used to represent first and last name values of users. |
| Question | The Questions that are asked to the user to gauge success of treatment. Not limited to: Multiple choice, scale questions and long answer questions. |

# Classes Attributes

|  |  |  |
| --- | --- | --- |
| **Patient Account** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| username | string | The username chosen by the patient, must be unique to each account. |
| password | string | The password associated with the patient account. |
| emailAddress | string | An email address that can be used to contact the user of the account. |
| billingInfo | string | The information required to process a payment for the account. |
| accountStatus | enum {active, inactive} | Dictates whether the account is currently active or inactive. |
| openCase | enum {open, closed} | Dictates whether the case for a specific injury or treatment plan is currently active on the account. |
| assignedRehabPlanID | int | The ID of the assigned rehab plan. |
| name | Name | The first and last name of the account owner. |
| sex | char | The sex of the patient. |
| dateOfBirth | date | When the person was born. |
| address | string | Describes the patient's home address. |
| telephoneNumber | string | The phone number of a user. |
| healthCardNumber | string | The patient's health card number. |
| maritalStatus | enum {married, single, divorced, widowed, other} | Describes if the patient is married, single, widowed, etc. |
| occupation | string | Describes the patient's current job. |
|  |  |  |
| **Appointment** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| appointmentID | string | Unique identification record for the appointment. |
| physicianID | string | An id string used to uniquely identify a physician. |
| patientID | string | An id string used to uniquely identify a patient. |
| timeOfAppointment | dateTime | The timeslot of a single appointment. |
|  |  |  |
| **Template Forms** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| questionsToAsk | Questions | Holds the strings of the questions needed for the form. |
| templateID | string | The id of the template report. |
| templateName | string | The saved name of the template form. |
|  |  |  |
| **Physician Account** | | |
| username | string | The username chosen by the physician to log into a physician account. |
| password | string | A password chosen by the physician to log into their account. |
| email | string | An email address used to contact the physician. |
| name | string | The name of the physician. |
|  |  |  |
| **Admin Account** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| username | string | The username chosen by the admin to log into an admin account. |
| password | string | A password chosen by the admin to log into their account. |
| email | string | An email address used to contact the admin. |
| name | string | The name of the admin. |
|  |  |  |
| **Rehab Plan** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| rehabPlanID | string | An id number used to uniquely identify a rehab plan. |
| name | string | The name of the rehab plan. |
| description | string | A brief description that describes the rehab plan. |
| authorName | Name | The author of the rehab plan. |
| objectives | string | The objectives of the rehab plan. |
| overallRehabilitationGoal | string | The overall desired outcome of the rehab plan and what it sets out to fix. |
| listOfExercises | string[] | A list of various exercises that are part of the rehab plan, ordered properly for the plan. |
| timeframeToCompletePlan | date | Gives an estimated time frame to complete the rehab plan. |
| assessmentTest | string[] | Gives a brief assessment of the rehab plan and shows the patient's progress in the rehab plan. |
|  |  |  |
| **Exercise** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| ExerciseID | string | The unique identification code for the exercise. |
| name | Name | The name of the exercise. |
| description | string | A brief description of the exercise. |
| authorName | string | The name of the author of the exercise. |
| objective | string | Lists the benefits of the exercise. |
| actionSteps | string | The steps to perform the exercise. |
| location | string | The muscle groups that the exercise will work on. |
| multimediaURL | string | A URL that links to a video of a demonstration of the exercise. |
|  |  |  |
| **Assessment Report** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| assessmentReportID | string | Unique assessment identifier. |
| paitentUsername | string | First and last name of patient. |
| description | string | Description of the report. |
| authorName | Name | First and last name of the author. |
| assessmentTools | Questions | Possible questions to be asked on the assessment. |
|  |  |  |
| **Progress Report** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| painLevel | int | Scale of 1 to 10 with 10 being the most pain, representative by smiley images. |
| mobilityMeasurement | int | Relative to starting measurement of 0 based on the activity. |
| notes | string | Any notes on the progress of the patient. |
|  |  |  |
| **Schedule** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| patientUsername | string | The unique code for the patient, foreign key. |
| physicianUsername | string | The unique ID code for the physician, foreign key. |
| appointments | string[] | All the appointments pertaining to the schedule owner. |
| scheduleOwner | string | The owner of the report (e.g. Physician, Patient). |
|  |  |  |
| **Transaction** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| transactionID | string | Unique transaction identifier. |
| patientUsername | string | Foreign key to patient identifier. |
| amount | float | Dollar amount of treatment cost to the second decimal. |
| paymentMethod | string | The user's choice of payment. |
| plan | string | Foreign key to exercise plan. |
| dateTime | dateTime | Date and time of payment. |
|  |  |  |
| **Exercises in Plans** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| exercise | string[] | A collection of exercises that will be paired with exercise plan information and then given to a plan. |
| repNumber | int[] | The number of times an exercise should be performed in a set. |
| duration | string[] | The duration to perform the exercise. |
| frequency | string[] | the frequency of the exercise, describing how quickly the exercise should be performed. |
| targetDate | date[] | The date that the specific exercise in the plan will transition to another stage e.g. duration form  4-5 minutes, frequency from slow to fast. |
|  |  |  |
| **Name** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| firstName | string | Given name. |
| lastName | string | Surname. |
|  |  |  |
| **Questions** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| mutipleChoiceAnswer | char | Responses with possible answers a, b, c, d , etc. |
| scaleAnswer | int | Responses to questions on a relative scale |
| longQuestionsAnswer | string | Written answer |
| multipleChoiceQuestion | string | Multiple choice questions |
| scaleQuestions | string | Questions on a scale |
| longQuestions | string | Written long answer questions |
|  |  |  |
| **Base Account** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| username | string | The username for any given account. |
| password | string | A password chosen for any given account. |
| email | string | An email address used to contact the account owner. |
| name | string | The name of the account owner. |
|  |  |  |
| **Registration Form** | | |
| **Attribute Name** | **Attribute Type** | **Description** |
| questionsToAsk | Questions | Holds the strings of the questions needed for the form. |
| registrationID | string | The id of the registration form. |
| formName | string | The saved name of the registration form. |

# Entity Class Diagram

