|  |
| --- |
| ***Product*** |
| *- name: String = “New Product”*  *- isActive: Boolean*  *- launchDate: Date*  *- itemNumber: Integer* |
| *+ getName (): String*  *+ setActive(Boolean)*  *+ getProductDetails (): String*  *+ displayProduct ()*  *- formatProductDetails (): String* |

\* Only make public (+) what is absolutely necessary. As private (-) as possible.

\* Underline static/shared attributes and behaviors among all instances of a class (Class-level, not instance-level).

\* Inheritance (parent class): Registration, Profile, Messages, Cancellation, Rate Experience, Email, [e.g. a customer registration IS A registration].

Parent class is not necessarily instantiated, rather specific sub classes. Such a class is called an abstract class (exists only to be inherited, to provide shared behaviors). Create and implement interfaces? Class-like objects containing method signatures. Learn C# particulars.

\* Aggregation [A customer HAS A address; A bank HAS MANY bank accounts.] (one classroom object can have many student objects)

\* Composition (class is made up of many objects). Ownership, when the owning objects is destroyed, so are the contained objects. (delete document object and all page objects are deleted as well)

abstract class Profile { … }

public class Profile : CustomerProfile { } the : means inherits from

Subclass calling a method inherited from Parent Class 🡪 base.doSomething();

* **Xamarin.Forms** screen navigation structure🡪 use NavigationPage (push), ListView, and TableView for current bookings list, profile, ~
* use alerts and ActionSheets to obtain user action input for various specific elements

|  |
| --- |
| **Registration** |
| - name: String  - address: String  - emailAddress: String  - registrationDate: Date  - registrationNumber: Integer  - registrationStatus: Boolean  - registrationType: String |
| + getCustomerConfirmation (): String  + getCleanerPending (): String  + getCleanerConfirmation (): String  + setActive(Boolean)  - getRegistrationDetails (): String  + displayRegistrationForm () |

|  |
| --- |
| **Profile** |
| - name: String  - address: String  - emailAddress: String  - phoneNumber: Float  - profileType: String |
| + displayProfileForm ()  - setProfileInfo (): String  - updateProfileInfo (): String  - setChanges (Boolean)  + getProfileInfo (): String  + getBaseLocation (): String |

|  |
| --- |
| **Messages** |
| - messageId: Integer  - messageDate: Date  - messageStatus: Boolean  - messageFlavor: String |
| - displayList ()  - createMessage (): String  - updateStatus (Boolean)  - addMessage ()  + getStatus (): String |

|  |
| --- |
| **Cancellation** |
| - cancellationId: Integer  - cancellationDate: Date  - cancellationType: String  + cancellationStatus: Boolean  - cancellationRate: Float |
| - displayCancellationForm ()  - setCancellationDetails (String)  + getStatus (): String  - setStatus (Boolean)  - createCancellationRequest (): String  + getConfirmation (): String  - cancelBooking () |

|  |
| --- |
| **Rate Experience** |
| - ratingType: String  - ratingId: Integer  - ratingStars: Integer  - ratingText: String  - ratingStatus: Boolean |
| - createRatingMessage ()  - setStars (): Integer  + getStatus (): String  - setStatus (Boolean) |

|  |
| --- |
| **Email** |
| - emailId: Integer  - emailType: String  - emailDate: Date  - emailFlavor: String  - emailStatus: Boolean |
| - emailMainAdmin (String)  - emailCleaningAdmin (String)  - emailCleaner (String)  - emailCustomer (String) |

|  |
| --- |
| **Push Notification** |
| - pushNotificationId: Integer  - pushNotificationType: String  - pushNotificationFlavor: String  - pushNotificationDate: Date |
| - sendNotificationToCustomer ()  - sendNotificationToCleaner () |

|  |
| --- |
| **Booking** |
| - status: String  - isActive: Boolean  - bookingId: Integer  - bookingDate: Date  - bookingFlavor: String  + bookingSlot |
| - displayBookingList ()  + getBookingStatus (Boolean): String  - displayBookingDetails ()  - setBookingDetails ()  - getBookingDetails (): String  - updateBookingDetails ()  - updateBookingList ()  - preAssignBooking ()  - assignBooking ()  + getAvailability [[[for cleaner object?]]]] |

|  |
| --- |
| **Legal Documentation** |
| - documentId: Integer  - status: String  - signedDate: Date  - cleaningAdminContract: String  - cleanerContract: String  - customerContract: String |
| + displayToCleaner (): String  + displayToCustomer (): String  + displayToCleaningAdmin (): String  + getStatus (Boolean)  - setStatus (): Boolean  - getForMainAdmin () |

|  |
| --- |
| **Payment** |
| - transactionId: Integer  - totalAmount: Double  - customerName: String  - isValid: Boolean  - bankInformation |
| - validatePayment ()  - processPayment ()  - createReceipt (): String  - setPaymentInfo ()  - updatePaymentInfo ()  - getTotal (): Double |

|  |
| --- |
| **Calendar** |
| + availableSlots: Integer  - calendarId: Integer |
| - displayCalendar ()  - displayAvailableSlots ()  - hideUnavailableSlots ()  - setBookingSlot ()  - setBookingDate (Date) |

|  |
| --- |
| **Cleaner** |
| + isAvailable: Boolean  - cleanerName: String  + baseNumber: Integer  - cleanerNumber: Integer  - cleaningCompanyName: String  + registrationId: Integer  - isActive: Boolean |
| + getAvailability (): Boolean  - getRegistrationStatus (): Boolean  - getCleanerInfo () |

|  |
| --- |
| **Customer** |
| - customerName: String  - customerAddress: String  - customerId: Integer  - status  - isActive: Boolean  + registrationId: Integer  - purchaseRate: Double |
| - getCustomerInfo ()  - getRegistrationStatus (): Boolean  - getPurchaseRate () |

|  |
| --- |
| **Cleaning Company Administrator** |
| + companyName: String  - cleaningManagerName: String  - employeeNumber: Integer  - totalEarnings: Double |
| - validateCleanerRegistration ()  - setFixedCost ()  - getTotalEarnings () |

|  |
| --- |
| **Main Administrator** |
| - mainAdminName: String |
| - displayPerformanceMetrics ()  - displayInformation () |

|  |
| --- |
| **Geolocation** |
| - startLocation  - endLocation  - instantaneousLocation  - locationId: Integer  + isActive: Boolean |
| - getCleanerLocation ()  - setCleanerLocation ()  - getStartLocation ()  - getEndLocation ()  + displayMap ()  - displayCleanerLocation ()  - getStatus ()  - getNearestCleaner () |

|  |
| --- |
| **Job** |
| - startTime  - startLocation  - endTime  - endLocation  - totalAmount: Double  - jobDuration |
| - startJob ()  - endJob ()  + getJobDuration ()  - setJobDuration ()  - setJobLocation ()  - getJobLocation ()  - getJobReceipt ()  - setActualQuote () |

|  |
| --- |
| **Quote** |
| - bedroomNumber: Integer  - bathroomNumber: Integer  - customAmount: Double  - actualAmount: Double  - expectedDuration |
| - displayExpectedQuote ()  - getExpectedQuote ()  - setBedrooms ()  - setBathrooms ()  - getActualQuote ()  - createReceipt ()  - getExpectedDuration ()  - displayExpectedDuration () |

|  |
| --- |
| **Database** |
| - databaseName: String  - isActive: Boolean |
| - updateData ()  - getData ()  - setData ()  - selectData ()  - storeData ()  - displayData ()  - lastUpdated ()  - insertData ()  - deleteData () |

|  |
| --- |
| **Network** |
| + isActive: Boolean  - networkName: String |
| - functionWithoutConnection () |

**Xamarin.Forms**

**Pages**: ContentPage, MasterDetailPage, NavigationPage, TabbedPage, CarouselPage

**Containers**: StackLayout, RelativeLayout, GridLayout, ScrollView

**Screen 1: First time registration**

Page 🡪 ContentPage

Container 🡪 StackLayout or RelativeLayout

**New Use Case**: Display live cleaner location in GPS map to customer when BookingStatus = “Ongoing”; isActive = “true”;

StackLayout for main screen and registration screen.