CODING BRAIN PROJECT DESIGN
"UMIGO"

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CRC CARDS

Administrator	
View Reports Change the status of a Report Manage UserCreatedContents Manage Listings Manage Users	User Listing Report UserCreatedContent

User (Reportable)	
Knows email Knows username Knows password Knows suspension status (suspended/not suspended) Knows remaining suspension time Create an account Notify via email when an account is created Delete own account Make Comments Delete own Comments View Comments from other Users Report other Users Edit profile Knows own Reports	Report Comment Listing

Student (User)	
Knows favorite Listings Search Listings Browse interactive map Make Reviews for Listings View Reviews from other Students Delete own Reviews Report Listings Add Listings to favorites list Remove Listings from favorites list	Listing Review Report

Landlord (User)	
Knows own Listings Create Listings Edit own Listings Delete own Listings Change availability status (available/unavailable) of own Listings Check statistics of views for own Listings	Listing

Listing (Reportable, Notificator)	
Knows features (price, location, rooms, bathroom information (private or shared, number of bathrooms and number of people who share them, if that is the case), photos, price of utilities) Knows availability state Knows views Knows Comments Knows Reviews Knows Students who have this Listing as favorite Knows rating Expose location for map Expose location for zone filter Notify Students who have this Listing as favorite when availability state changes	Student Comment Review

UserCreatedContent	
Knows text Knows User who published it	User

Comment (UserCreatedContent)	
Knows Comments under itself	

Review (UserCreatedContent)	
Knows star rating (0 to 5)	

Report (Notificator)	
Knows Reportable attached to it Knows reason Knows status (under review/accepted/rejected)	Reportable User

Reportable	
Show own content (depending on the subclass) Show User who created this content (or the User itself, if the Reportable is a User)	User

Notificator	
Knows Users to notify Notify	User
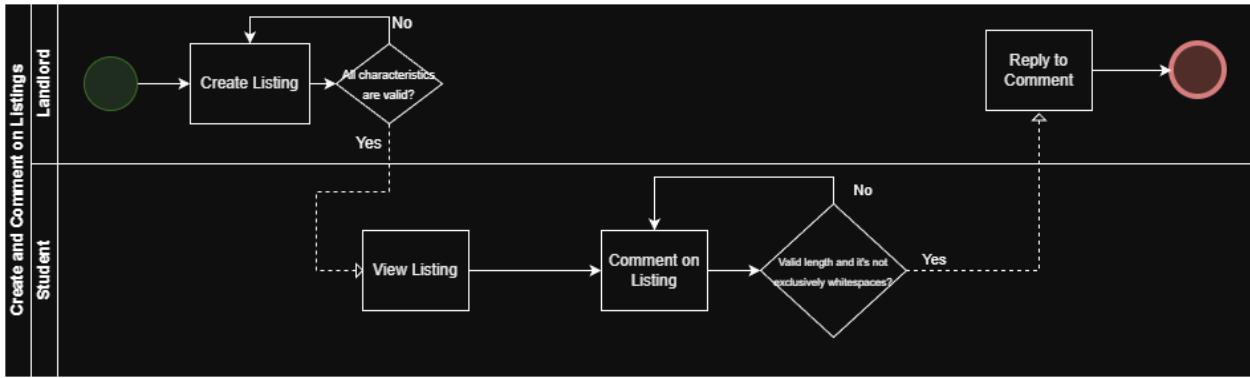
Login	
Check credentials for access	User
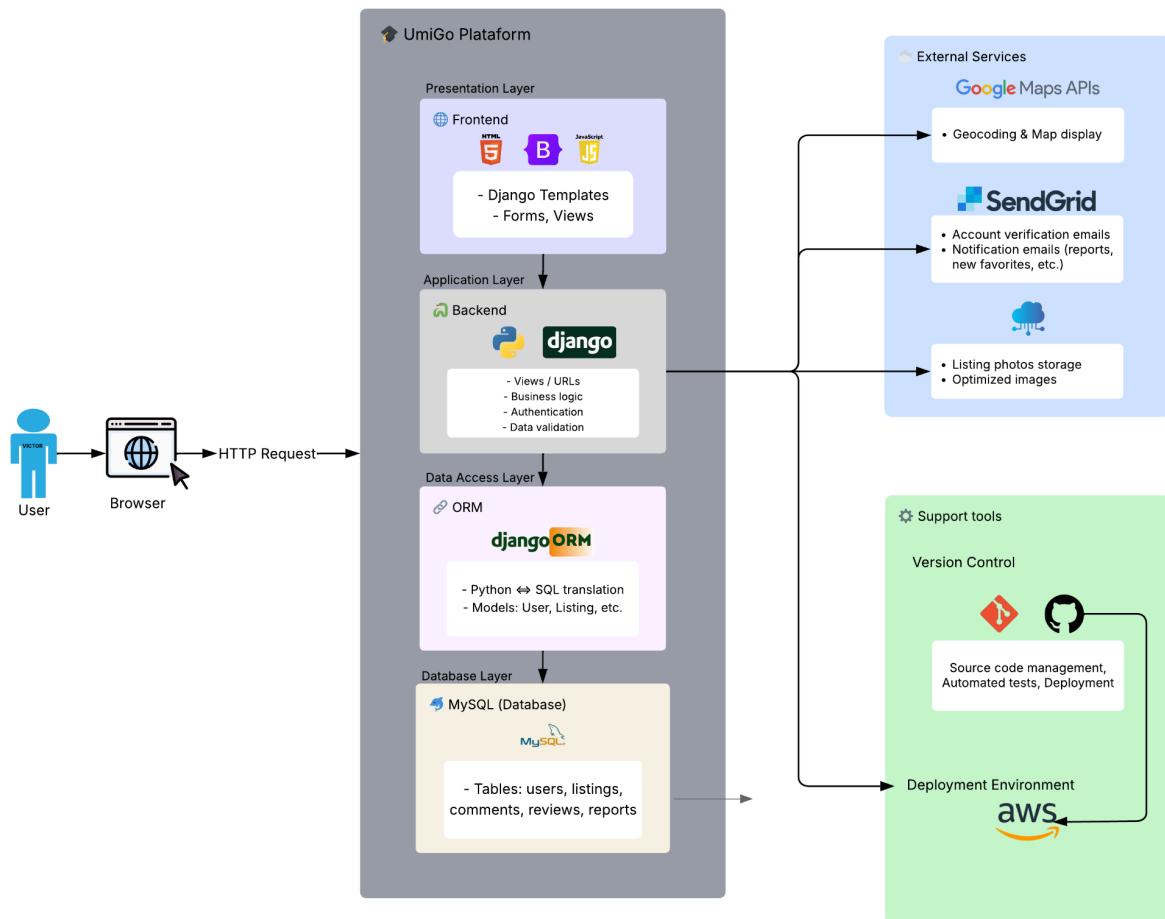
Mockups

https://www.canva.com/design/DAG344OhwGs/h_6B1OkF-fARRjqabIhz4Q/edit
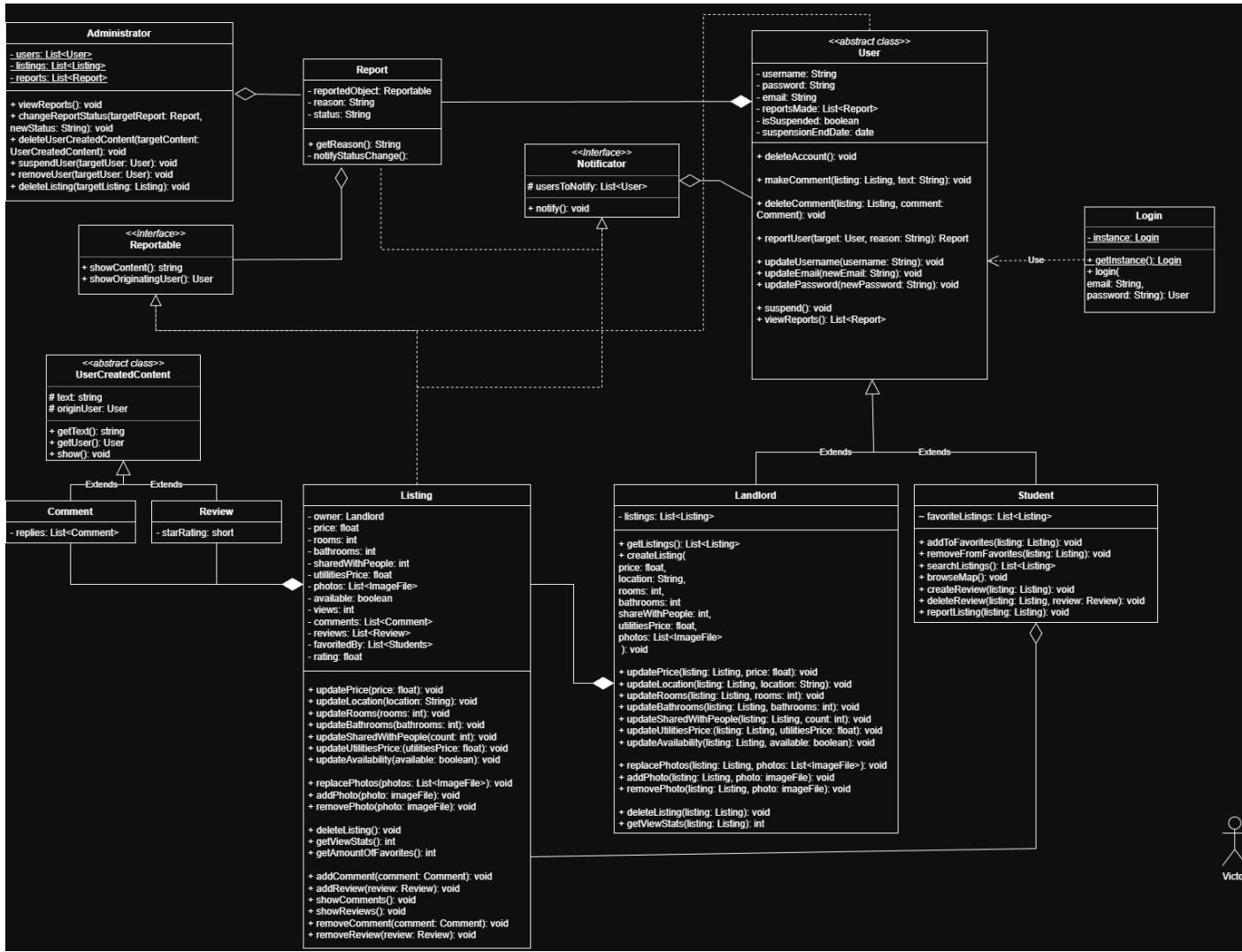
Business Model Process

Architecture Diagram

Class Diagram

Administrator
- users: List<User>
- listings: List<Listing>
- reports: List<Report>

+ viewReports(): void
+ changeReportStatus(targetReport: Report, newStatus: String): void
+ deleteUserCreatedContent(targetContent: UserCreatedContent): void
+ suspendUser(targetUser: User): void
+ removeUser(targetUser: User): void
+ deleteListing(targetListing: Listing): void

Report
- reportedObject: Reportable
- reason: String
- status: String

+ getReason(): String
- notifyStatusChange():

<<Interface>> Notificator
usersToNotify: List<User>

+ notify(): void

<> User
- username: String
- password: String
- email: String
- reportsMade: List<Report>
- isSuspended: boolean
- suspensionEndDate: date

+ deleteAccount(): void
+ makeComment(listing: Listing, text: String): void
+ deleteComment(listing: Listing, comment: Comment): void
+ reportUser(target: User, reason: String): Report
+ updateUsername(username: String): void
+ updateEmail(newEmail: String): void
+ updatePassword(newPassword: String): void
+ suspend(): void
+ viewReports(): List<Report>

Login
- instance: Login

+ getInstance(): Login
+ login(
email: String,
password: String): User

... Use ...

<<Interface>> Reportable
+ showContent(): string
+ showOriginatingUser(): User

<> UserCreatedContent
text: string
originUser: User

+ getText(): string
+ getUser(): User
+ show(): void

Extends

Comment
- replies: List<Comment>

Extends

Review
- starRating: short

Listing
- owner: Landlord
- price: float
- rooms: int
- bathrooms: int
- sharedWithPeople: int
- utilitiesPrice: float
- photos: List<ImageFile>
- available: boolean
- views: int
- comments: List<Comment>
- reviews: List<Review>
- favoritedBy: List<Students>
- rating: float

+ updatePrice(price: float): void
+ updateLocation(location: String): void
+ updateRooms(rooms: int): void
+ updateBathrooms(bathrooms: int): void
+ updateSharedWithPeople(count: int): void
+ updateUtilitiesPrice:(utilitiesPrice: float): void
+ updateAvailability(available: boolean): void
+ replacePhotos(photos: List<ImageFile>): void
+ addPhoto(photo: imageFile): void
+ removePhoto(photo: imageFile): void
+ deleteListing(): void
+ getViewStats(): int
+ getAmountOfFavorites(): int
+ addComment(comment: Comment): void
+ addReview(review: Review): void
+ showComments(): void
+ showReviews(): void
+ removeComment(comment: Comment): void
+ removeReview(review: Review): void

Landlord
- listings: List<Listing>

+ getListings(): List<Listing>
+ createListing(
price: float,
location: String,
rooms: int,
bathrooms: int,
shareWithPeople: int,
utilitiesPrice: float,
photos: List<ImageFile>
): void
+ updatePrice(listing: Listing, price: float): void
+ updateLocation(listing: Listing, location: String): void
+ updateRooms(listing: Listing, rooms: int): void
+ updateBathrooms(listing: Listing, bathrooms: int): void
+ updateSharedWithPeople(listing: Listing, count: int): void
+ updateUtilitiesPrice:(listing: Listing, utilitiesPrice: float): void
+ updateAvailability(listing: Listing, available: boolean): void
+ replacePhotos(listing: Listing, photos: List<ImageFile>): void
+ addPhoto(listing: Listing, photo: imageFile): void
+ removePhoto(listing: Listing, photo: imageFile): void
+ deleteListing(listing: Listing): void
+ getViewStats(listing: Listing): int

Student
~ favoriteListings: List<Listing>

+ addToFavorites(listing: Listing): void
+ removeFromFavorites(listing: Listing): void
+ searchListings(): List<Listing>
+ browseMap(): void
+ createReview(listing: Listing): void
+ deleteReview(listing: Listing, review: Review): void
+ reportListing(listing: Listing): void

Extends   Extends

Victor

Database model

favorite

student_id 🔗	bigint	NN
listing_id 🔗	bigint	NN
created_at	datetime	

student

| **user_id** 🖉 | bigint | |
| created_at | datetime | NN |

comment

id 🖉	bigint	NN
listing_id 🔗	bigint	NN
user_id 🔗	bigint	NN
parent_comment_id 🔗	bigint	
text	varchar(800)	NN
created_at	datetime	NN
updated_at	datetime	NN

user

id 🖉 🔗	bigint	
email	varchar(180)	NN
username	varchar(60)	NN
password	varchar(44)	NN
is_suspended	boolean	NN
suspension_end_at	datetime	
created_at	datetime	NN
updated_at	datetime	NN

listing_report

| **report_id** 🖉 | bigint | |
| listing_id 🔗 | bigint | NN |

admin

| **id** 🖉 | bigint | |
| created_at | datetime | NN |

listing_photo

id 🖉	bigint	
listing_id 🔗	bigint	NN
url	varchar(300)	NN
mime_type	varchar(50)	NN
size_bytes	bigint	NN
sort_order	smallint	NN
created_at	datetime	NN

landlord

user_id 🖉	bigint	
national_id	varchar(20)	NN
id_front_url	varchar(300)	NN
id_back_url	varchar(300)	NN
created_at	datetime	NN

listing

id 🖉	bigint	
owner_id 🔗	bigint	NN
price	decimal(12,2)	NN
location_text	varchar(255)	NN
lat	decimal(9,6)	NN
lng	decimal(9,6)	NN
zone_id 🔗	bigint	NN
rooms	int	NN
bathrooms	int	NN
shared_with_people	int	NN
utilities_price	decimal(12,2)	NN
available	boolean	NN
views	int	NN
popularity	float	NN
created_at	datetime	NN
updated_at	datetime	NN

university

id 🖉	bigint	
name	varchar(180)	NN
lat	decimal(9,6)	NN
lng	decimal(9,6)	NN
city	varchar(120)	NN
zone_id 🔗	bigint	NN
created_at	datetime	NN
updated_at	datetime	NN

review

id 🖉	bigint	
listing_id 🔗	bigint	NN
student_id 🔗	bigint	NN
rating	tinyint	NN
text	varchar(800)	
created_at	datetime	NN
updated_at	datetime	NN

report

id 🖉 🔗	bigint	
reporter_id 🔗	bigint	NN
reason	varchar(255)	NN
status	report_status E	NN
reviewed_by 🔗	bigint	NN
created_at	datetime	NN
updated_at	datetime	NN

zone

id 🖉	bigint	
name	varchar(120)	NN
city	varchar(120)	NN
created_at	datetime	NN
updated_at	datetime	NN

user_report

| **report_id** 🖉 | bigint | |
| reported_user_id 🔗 | bigint | NN |