Entity Types & Attributes:

1. **User Profile Entity:**
   o Attributes: UserID (PK), UserName, Password, Email, UserType (Student, Roommate, Housing Provider), Preferences (JSON or XML format), ProfileCreationDate.

2. **Student Profile Entity:**
   o Attributes: StudentID (PK, FK to UserID), InstitutionID (FK), AcademicInterests, HousingPreferences, BudgetRange.

3. **Roommate Profile Entity:**
   o Attributes: RoommateID (PK, FK to UserID), LifestylePreferences, Age, Gender, Occupation, SmokingPreference, PetPreference.

4. **Housing Provider Entity:**
   o Attributes: ProviderID (PK, FK to UserID), Name, ContactInfo, Rating, ReviewCount.

5. **University Entity:**
   o Attributes: InstitutionID (PK), InstitutionName, Location, ContactInfo, HousingResourceLink.

6. **Housing Listing Entity:**
   o Attributes: ListingID (PK), ProviderID (FK), Address, Price, RoomType, Amenities, AvailabilityStatus, ReviewID.

7. **Message Entity:**
   o Attributes: MessageID (PK), SenderID (FK to UserID), ReceiverID (FK to UserID), Content, Timestamp.

8. **Review Entity:**
   o Attributes: ReviewID (PK), ListingID (FK), ReviewerID (FK to UserID), Rating, Comment, ReviewDate.

9. **Payment Transaction Entity:**
   o Attributes: TransactionID (PK), PayerID (FK to UserID), PayeeID (FK to UserID or ProviderID), Amount, TransactionDate, Status.

10. **Matchmaking Algorithm Entity:**
    o Attributes: MatchID (PK), StudentID (FK), RoommateID (FK), CompatibilityScore.

11. **Administrator Entity:**
    o Attributes: AdminID (PK, FK to UserID), Name, ContactInfo, Role.

E-R Diagram (First Version):

The E-R diagram would visually represent the relationships between given entities.

User Profile Entity
UserID (PK)
UserName
Password
Email
UserType (Student, Roommate, Housing Provider)
Preferences (JSON or XML format)
ProfileCreationDate.

Student Profile Entity
StudentID (PK, FK to UserID)
InstitutionID (FK)
AcademicInterests
HousingPreferences
BudgetRange.

Housing Provider Entity:
ProviderID (PK, FK to UserID)
Name
ContactInfo
Rating
ReviewCount

Roommate Profile Entity
RoommateID (PK, FK to UserID)
LifestylePreferences
Age
Gender
Occupation
SmokingPreference
PetPreference

University Entity
InstitutionID (PK)
InstitutionName
Location
ContactInfo
HousingResourceLink

Message Entity
MessageID (PK)
SenderID (FK to UserID)
ReceiverID (FK to UserID)
Content
Timestamp.

Housing Listing Entity
ListingID (PK)
ProviderID (FK)
Address
Price
RoomType
Amenities
AvailabilityStatus
ReviewID

Payment Transaction Entity
TransactionID (PK)
PayerID (FK to UserID)
PayeeID (FK to UserID or ProviderID)
Amount
TransactionDate,
Status

Matchmaking Algorithm Entity
MatchID (PK)
StudentID (FK)
RoommateID (FK)
CompatibilityScore

Administrator Entity
AdminID (PK, FK to UserID)
Name
ContactInfo
Role

Review Entity
ReviewID (PK)
ListingID (FK)
ReviewerID (FK to UserID)
Rating
Comment
ReviewDate