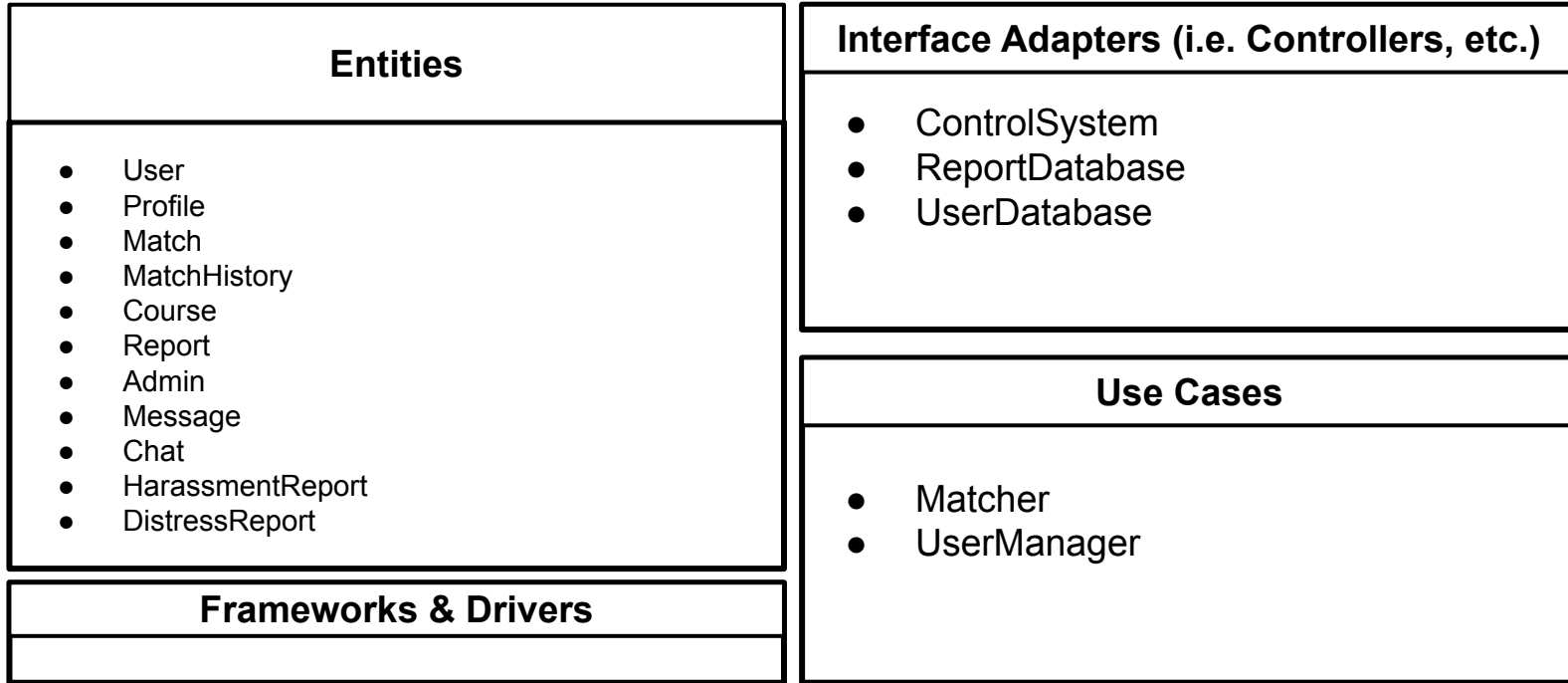


Amigos CRC Model - Clean Architecture Overview



CRC Card: ControlSystem

ControlSystem (Controller)

- Retrieves dictionary of user ids mapped to user objects from UserManager and sends the dictionary to Matcher
- Receives and processes input
- Sends user id and/or instructions to UserManager and Matcher
- Receives matches from Matcher and sends it to UserManager

Matcher
UserManager

CRC Card: User

| User (Entity) | | Admin |
|---|-------------------------|-------|
| <ul style="list-style-type: none">• Stores a profile (using an instance method)• Stores a unique identifier (users are unique)• Stores current matches• Stores MatchHistory• Flag (a boolean) for report• Stores BlockedUser (users that this person blocks)• Stores checkbox (a boolean) for wildcard (random) matches | Profile MatchHistory | |

CRC Card: Profile

Profile (Entity)

- Stores information (private attribute) regarding
 - Name
 - Year of Study
 - Program of Study
 - Courses for a Term
 - Interest(s)
 - Contact Information
- Have getters for all of these
- Setters for all of these

Course

CRC Card: UserManager

UserManager (Use Case)

- Creates and deletes user and user profile
- Modifies user profile using profile setters
- Retrieves a dictionary which maps user ids to user objects from UserDatabase
- Stores the dictionary when the program is running
- Sends the dictionary to ControlSystem
- Receives matches from ControlSystem
- Modifies User's current matches

User
UserDatabase
Profile
ControlSystem

CRC Card: UserDatabase

UserDatabase (Gateway)

- | | |
|---|-------------|
| <ul style="list-style-type: none">• Writes and reads users to and from external storage (database/text file)• Sends list of users to UserManager | UserManager |
|---|-------------|

CRC Card: Admin

| Admin (Entity) | | User |
|---|----------------|-------------|
| <ul style="list-style-type: none">• Admin is a User but with special privileges• Admin can access reports through the ReportDatabase and mark a report as resolved | ReportDatabase | |

CRC Card: Matcher

| Matcher (Use Case) | |
|--|---------------|
| <ul style="list-style-type: none">• Generates matches based on user's courses and interests• Generates wildcard (random) matches for a user if that user if that user has opted for it• Sends matches to ControlSystem for it to handle how to store matches | ControlSystem |

CRC Card: Match

| Match (Entity) | |
|---|------|
| <ul style="list-style-type: none">• Stores the two users' IDs• Time of match• Stores the Metric/Percentage of Match | User |

CRC Card: MatchHistory

MatchHistory (Entity)

- Has a 'clean' method to erase rejected history for the past term
- Stores the amigos per user
- Stores rejected matches per user
- Stores blocked users

User
Match

CRC Card: Course

| Course (Entity) | |
|--|------|
| <ul style="list-style-type: none">• Stores the course code• Stores their preferred lecture/tutorial/section• Stores all the lecture sections they can attend | User |

CRC Card: Message

| Message (Entity) | |
|--|------|
| <ul style="list-style-type: none">• Stores the content of the message• Stores the sender of the message• Stores the date and time of message | User |

CRC Card: Chat

| Chat (Entity) | |
|---|------|
| <ul style="list-style-type: none">• Stores an ordered collection of messages• In a chat, each message can only have one out of two senders | User |

CRC Card: Report

| Report (Entity) | |
|---|--|
| HarassmentReport DistressReport | |
| <ul style="list-style-type: none">• An abstract class which contains report information for an admin to review and resolve• Stores the following information<ul style="list-style-type: none">○ Which user filed the report○ Which user is the report filed against○ Date of report filing○ Has the admin resolved the report (boolean) | |

CRC Card: DistressReport

| DistressReport (Entity) | | Report |
|---|--|--------|
| <ul style="list-style-type: none">• Stores optional report information<ul style="list-style-type: none">○ Stores user id of the user in distress<ul style="list-style-type: none">■ Displays distress hotline to the user in distress | | |

CRC Card: HarassmentReport

| HarassmentReport (Entity) | | Report |
|--|--|--------|
| <ul style="list-style-type: none">• It is a subclass of report meant only for harassment cases | | |

CRC Card: ReportDatabase

| ReportDatabase (Gateway) | |
|--|-------|
| <ul style="list-style-type: none">• Stores reports sorted by time filled | Admin |