

# SW Engineering CSC648-848

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## Playdate – Team 03

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“Milestone 1”

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## 1. Summary

Nowadays, most parents prefer to engage their kids with other kids. This helps in nurturing their social skills and creating fun moments for them. Similarly, pets also love to have the company of other pets where they can play around and enjoy each other's company. Unfortunately, finding the right playdate can be difficult, especially when you are not very familiar with people around you or are surrounded by others who do not share your interests. Now, we present Playdate, a web application where we connect parents with other parents who are in search of playdates for their kids or pets. Parents can sign up on PlayDate and plan events to hangout. They will find people of similar interests and form their groups. The goal of our application is to enable parents to create useful moments for their kids and pets without compromising the privacy and security of the users.

## 2. Main Use Cases

Title	2.1 Register, Login, Post
Actors	Mary (General User), Helen (Registered User)
Description	<p>Mary likes to take her young children to parks, libraries, museums, or other outdoor activities, but she always has difficulty finding outdoor playdates for her children. Mary's friend, Helen, introduces her to the "PlayDate" on which she goes through public events which seem fascinating, but find out our other parents' schedule and activities to help her find a playdate for her children. Mary thinks this app is fantastic, but she can only view public events before she registers. As Mary uses a referral link shared by Helen, she only needs to provide proof that she has kids to be registered and can have a free use of this app. After registering, Mary can login to and interact with other parents in the application.</p>
Diagram	<pre> graph LR     subgraph "PlayDate System"         direction TB         UC1([View Public Info])         UC2([Search Public Info])         UC3([Register])         UC4([Login])         UC5([Edit Profile])         UC6([Upload Proof])         UC7([View Events])         UC8([Comment Events])         UC9([Sign Up Events])         UC10([Post Events])         UC11([Add User In])         UC12([Delete Post])         UC13([Remove Users])         UC14([Search Events])         UC15([Cancel Events])         UC16([Log Out])         UC17([Edit Her Post])         UC18([Delete Her Post])     end      MGU[Mary General User] -.- UC1     MGU -.- UC2     MGU -.- UC3     MRU[Mary Registered User] -.- UC4     MRU -.- UC5     MRU -.- UC6     MRU -.- UC7     MRU -.- UC8     MRU -.- UC9     MRU -.- UC10     Admin[Admin] -.- UC11     Admin -.- UC12     Admin -.- UC13 </pre> <p>Visual Paradigm Online Free Edition</p>

Title	2.2 Group Creation and Sharing
Actors	Tom (Group User Admin), Helen (registered user)
Description	<p>Some parents living in the same community want to share some group activities and want this information to be private only in the group. Tom takes the lead and creates a group. He becomes the admin for this group. He adds other parents from the same community by searching for the users based on his community address, where he finds Helen and adds her to the group. Tom gets to know that he can add a maximum of 50 parents only and her group is full. Helen is a member in Tom's group. She planned to hike with her son and needed some company for her son. So, she posted an activity of going hiking on Sunday in this group. Many other parents signed up for this activity. On Sunday morning, Helen ran into some unexpected situation and wanted to cancel her activity. When she canceled it, her name was removed from the sign-up sheet and other people can continue their activity as scheduled. (If Helen is the only person on the sign-up sheet, this activity post will be removed.)</p>
Diagram	<p>Visual Paradigm Online Free Edition</p> <pre> graph LR     subgraph PlayDate_System [PlayDate System]         direction TB         U1((Create a Group))         U2((Search Groups))         U3((Apply Join Group))         U4((Search Group Events))         U5((Post Group Events))         U6((Cancel Posted Events))         U7((Sign Up Group Events))         U8((Add User into Group))         U9((Delete Group Posts))         U10((Remove Group Users))         U11((Edit Her Posts))         U12((Comment Group Post))         U13((Cancel Signed Events))         U14((Quit Group))     end     Tom_Registered[Tom (Registered User)] --- U1     Tom_Registered --- U2     Tom_Registered --- U3     Helen_Registered[Helen (Registered User)] --- U4     Helen_Registered --- U5     Helen_Registered --- U6     Helen_Registered --- U7     Helen_GroupUser[Helen (Group User)] --- U7     Helen_GroupUser --- U14     Tom_GroupAdmin[Tom (Group Admin)] --- U8     Tom_GroupAdmin --- U9     Tom_GroupAdmin --- U10 </pre> <p>Visual Paradigm Online Free Edition</p>

Title	2.3 Joining group
Actors	Helen, Tom (Registered group Users)
Description	<p>Mary is a new user on PlayDate. She can either stay without being part of group or create or join existing groups. She wants to join an existing group to get started and hence goes through the groups available on PlayDate. The groups are suggested based on common interests she mentions on the profile. Mary finds a group of “hikers”. She thinks she best fits into that group and sends a request to join the group. Tom, who is the admin of that group, approves her request. Now Mary is part of that group and can view all activities of that group.</p>
Diagram	<pre> graph TD     subgraph "Visual Paradigm Online Free Edition"         subgraph "Create a New Group"             direction TB             C1[Create a New Group]         end         subgraph "Join an Existing Group"             direction TB             C2[Search for a specific group]             C3[Browse through existing groups]             C2 --&gt; C3         end         subgraph "Browse through existing groups"             direction TB             C4[View a list of groups curated based on Mary's preferences.]             C5[Sending a request to join group]             C4 --&gt; C5         end         subgraph "Group Admin Interface"             direction TB             C6[Request is Received]             C7[Accept Request]             C8[Reject Request]             C6 --&gt; C7             C6 --&gt; C8         end         subgraph "Accessibility to Group Functions"             direction TB             C9[Grant Access to Regular User Group Privileges]         end     end      Mary((Mary)) --&gt; C3     C5 -- "Request is sent" --&gt; C6     C7 -- "Tom Approves the Request" --&gt; C9     C9 --&gt; Mary      Note[Mary can now access functionality exclusive to that particular group]   </pre> <p>The diagram illustrates the process of joining a group. It starts with Mary, a new user, who browses through existing groups. She views a list of groups curated based on her preferences and sends a request to join a specific group. This request is received by Tom, the group admin, who then approves the request. Once approved, Mary is granted access to regular user group privileges, allowing her to access functionality exclusive to that group. The diagram is created using Visual Paradigm Online Free Edition.</p>

Title	2.4 Creating Group Events
Actors	Helen, Tom, Ben (Registered group Users)
Description	<p>Helen planned to hike with her son and needed some company for her son. She checks on the group members schedule to see if anyone is available and choses suitable time for the hike. She creates an activity of hiking on Sunday. Helen can either post this only to the group she is part of or invite other users by making the event public. She decided to post it in her group which triggers notification to group members. Tom sees the notification and uses it to sign up for the event. Ben, who missed his notification, sees the event listing on the group and uses that to sign up for the event. Many more parents signed up for this activity. If Helen is the only person on sign-up sheet by the start of event, this activity post will be removed.</p>
Diagram	<pre> graph LR     subgraph "Creating Group Events"         UC1([View Group Schedule])         UC2([Create Group Event])         UC3([Receive Group Event Notification])         UC4([Sign Up for Event through Notification])         UC5([Sign Up for Event through Group])     end     subgraph "Helen's Group"         H((Helen))         T((Tom))         B((Ben))     end     UC1 --- H     UC2 --- H     UC3 --- T     UC3 --- B     UC4 --- T     UC4 --- B     UC5 --- B </pre> <p>The diagram illustrates the process of creating and signing up for group events. It features a central box titled "Creating Group Events" containing five use cases: "View Group Schedule" (blue), "Create Group Event" (blue), "Receive Group Event Notification" (grey), "Sign Up for Event through Notification" (pink), and "Sign Up for Event through Group" (teal). To the right, a box titled "Helen's Group" contains three actors: Helen (blue head), Tom (pink head), and Ben (teal head). Lines connect the use cases to the actors: Helen is connected to "View Group Schedule" and "Create Group Event"; Tom and Ben are connected to "Receive Group Event Notification" and "Sign Up for Event through Notification"; and Ben is connected to "Sign Up for Event through Group".</p>

Title	2.5 Creating Public Events
Actors	Eric, Al, Cole (Registered group Users)
Description	<p>Eric decides he wants to put together a local dog show, mainly because he wants to show off his favorite dog, Barkour. After putting in some planning, Eric creates a public event at the lawn of the local library (indeed, after getting the necessary permits!). While he is part of a local dog group, he does want to send out invitations to dog owners in the area, so he sends out a public notification to any dog owners within 10 miles of the event. Al, who loves her pet dog Rune and lives 5.4 miles away, gets the notification and decides to join the event. Eric approves Al's invitation. Cole, who does not have a dog, but does have a child named Patty, searches for nearby events. They decide they want to take Patty to the dog show, so they also try to join the event. Eric, receiving Cole's request, decides to accept the invite. Everyone goes to the event, at which Patty seems to connect with Rune very well, so Cole finds the event listing and sends an invite to Al to join their local group.</p>
Diagram	<pre> sequenceDiagram     actor Eric     actor Al     actor Cole     Eric-&gt;&gt;CreatePublicEvent: Create Public Event     Eric-&gt;&gt;SendPublicInvite: Send Public Invite to Filtered Users     Al-&gt;&gt;RespondToPublicInvite: Respond to Public Invite     Eric-&gt;&gt;ApprovePublicInviteResponse: Approve Public Invite Response     Cole-&gt;&gt;SearchForNearbyEvents: Search for Nearby Events     Cole-&gt;&gt;RequestEventSignup: Request Event Signup     Eric-&gt;&gt;ApprovePublicRequest: Approve Public Request     Cole-&gt;&gt;FindElapsedEvent: Find Elapsed Event     Cole-&gt;&gt;ViewEventAttendees: View Event Attendees     Cole-&gt;&gt;SendGroupInvite: Send Group Invite     </pre> <p>The diagram is a UML Use Case Diagram titled "2.5 Creating Public Events". It features three actors: Eric (blue head), Al (pink head), and Cole (green head). The use cases are represented by ovals: "Create Public Event" (blue), "Send Public Invite to Filtered Users" (blue), "Respond to Public Invite" (pink), "Approve Public Invite Response" (blue), "Search for Nearby Events" (teal), "Request Event Signup" (teal), "Approve Public Request" (blue), "Find Elapsed Event" (teal), "View Event Attendees" (teal), and "Send Group Invite" (teal). The diagram shows the following interactions: Eric initiates "Create Public Event" and "Send Public Invite to Filtered Users". Al responds with "Respond to Public Invite", which Eric then approves with "Approve Public Invite Response". Cole searches for events with "Search for Nearby Events", requests a signup with "Request Event Signup", which Eric approves with "Approve Public Request". Finally, Cole finds an event with "Find Elapsed Event", views attendees with "View Event Attendees", and sends a group invite with "Send Group Invite".</p>



Title	2.6 Emergency Assistance
Actors	Tom (Registered Users), Police
Description	<p>Tom wants to take his son for hiking in Berkeley Hill. He posted this activity on “PlayDate” one day before, but didn’t get any playdates to go with, so he decided to go alone. During their hiking, his son was trapped by a tree root and fell into a pit and broke his leg. Tom remembers the emergency button on “PlayDate”, he quickly pressed that button and jumped down to check his son. The app automatically sends an emergency message to the nearest police station according to Jack’s schedule which has a location on it along with Tom’s contact number.</p>
Diagram	<pre> sequenceDiagram     actor Tom as Tom (Registered User)     participant EmergencyAssistance as Emergency Assistance     participant Police as Police     participant Unregistered as (Unregistered User)      Tom--&gt;&gt;EmergencyAssistance: Add emergency contact     EmergencyAssistance-&gt;&gt;Tom: Raise Emergency     EmergencyAssistance-&gt;&gt;Police: Notify Police     EmergencyAssistance-&gt;&gt;Unregistered: Notify emergency contact     Police--&gt;&gt;EmergencyAssistance: &lt;&lt;Include&gt;&gt;     Unregistered--&gt;&gt;EmergencyAssistance: &lt;&lt;Include&gt;&gt; </pre> <p>The diagram illustrates the 'Emergency Assistance' process. It features a central box labeled 'Emergency Assistance' containing four use cases: 'Add emergency contact', 'Raise Emergency', 'Notify Police', and 'Notify emergency contact'. The actors involved are 'Tom (Registered User)' (represented by a stick figure with an orange head), 'Police' (stick figure with a blue head), and '(Unregistered User)' (stick figure with a blue head). Tom initiates the process by interacting with 'Add emergency contact'. The 'Raise Emergency' use case is connected to Tom. 'Notify Police' is connected to the Police actor, and 'Notify emergency contact' is connected to the Unregistered User actor. Dashed arrows labeled '&lt;&lt;Include&gt;&gt;' point from 'Notify Police' and 'Notify emergency contact' back to the 'Raise Emergency' use case, indicating that these actions are included within the 'Raise Emergency' process.</p>

Title	2.7 Surveys for the event
Actors	Jeff (Registered User), Parents (Registered users)
Description	Jeff was invited to a kid's birthday party where everyone was asked to help bring food or beverages to the party. Jeff was going to bring soda but wasn't sure which type of soda people liked best. He knew it was going to be a big party so instead of asking in a post and having to read and count comments, Jeff created a survey that makes it easy to track a count of responses.
Diagram	<pre> sequenceDiagram     actor Jeff     actor Parents as Parents     actor Attendees as Event attendees     Jeff-&gt;&gt;Parents: Text     activate Parents     Parents-&gt;&gt;Jeff: Accept event invitation     deactivate Parents     Jeff-&gt;&gt;Attendees: Create a survey as a post     activate Attendees     Attendees-&gt;&gt;Jeff: Respond to survey post     deactivate Attendees </pre> <p>The diagram is a UML Use Case Diagram titled "Add survey to event post". It features three actors: Jeff (a stick figure with a blue head), Parents (represented by three stick figures with green heads), and Event attendees (represented by three stick figures with green heads). The diagram shows three use cases: "Accept event invitation" (purple oval), "Create a survey as a post" (purple oval), and "Respond to survey post" (pink oval). The flow of interactions is as follows: Jeff sends a "Text" message to the Parents actor. The Parents actor then triggers the "Accept event invitation" use case. After this use case, Jeff triggers the "Create a survey as a post" use case. The Event attendees actor then triggers the "Respond to survey post" use case, which finally sends a response back to Jeff.</p>

Title	2.8 Technical Support
Actors	Tom (Registered Users), Service Support, Technical Personnel
Description	Tom wants to share his dog-walk activity with other pet owners, but he keeps failing to post it. Tom contacts the support service and reports the bug in the system. Service support staff responded to Tom on his issue and sends a message to the technical personnel and let them solve the issue. Once the issue is solved, the issue is sent back to the service staff to update Tom. Once updated, this issue is resolved, but Tom can still check to see whether the issue is resolved.
Diagram	<pre> sequenceDiagram     actor Tom     actor Support     actor Tech as Technical Personnel     usecase Tom as Report Issue     usecase Support as Receive Issue Notification     usecase Support as Respond to Issue User     usecase Support as Send Issue to Technical Personnel     usecase Tech as Receive Issue Notification     usecase Tech as Update/Fix Issue     usecase Tech as Send Issue to Support     usecase Support as Receive Issue Notification     usecase Support as Respond to Issue User     usecase Support as Close Issue     usecase Tom as View Issue      Tom-&gt;&gt;Tom: Report Issue     Tom-&gt;&gt;Support:      Support-&gt;&gt;Support: Receive Issue Notification     Support-&gt;&gt;Support: Respond to Issue User     Support-&gt;&gt;Tech: Send Issue to Technical Personnel     Tech-&gt;&gt;Tech: Receive Issue Notification     Tech-&gt;&gt;Tech: Update/Fix Issue     Tech-&gt;&gt;Support: Send Issue to Support     Support-&gt;&gt;Support: Receive Issue Notification     Support-&gt;&gt;Support: Respond to Issue User     Support-&gt;&gt;Support: Close Issue     Support-&gt;&gt;Tom:      Tom-&gt;&gt;Tom: View Issue </pre> <p>The diagram illustrates the 'Technical Support' process involving three actors: Tom (Registered Users), Service Support, and Technical Personnel. The process is divided into two main sections: 'Technical Support' (enclosed in a box) and 'User Interaction'.</p> <ul style="list-style-type: none"> <li><b>Technical Support Section (Boxed):</b> <ul style="list-style-type: none"> <li><b>Report Issue:</b> Tom initiates the process by reporting the issue.</li> <li><b>Receive Issue Notification:</b> Service Support receives the notification.</li> <li><b>Respond to Issue User:</b> Service Support responds to Tom.</li> <li><b>Send Issue to Technical Personnel:</b> Service Support sends the issue details to Technical Personnel.</li> <li><b>Receive Issue Notification:</b> Technical Personnel receives the notification.</li> <li><b>Update//Fix Issue:</b> Technical Personnel updates or fixes the issue.</li> <li><b>Send Issue to Support:</b> Technical Personnel sends the updated issue back to Service Support.</li> </ul> </li> <li><b>User Interaction Section:</b> <ul style="list-style-type: none"> <li><b>Receive Issue Notification:</b> Service Support receives the notification from Technical Personnel.</li> <li><b>Respond to Issue User:</b> Service Support responds to Tom.</li> <li><b>Close Issue:</b> Service Support closes the issue.</li> <li><b>View Issue:</b> Tom views the issue status.</li> </ul> </li> </ul>

Title	2.9 Reviewing Event
Actors	Tom, Helen (Registered Users)
Description	Jeff really loved the event, so after the event Jeff wanted to share his experience with others in the group who couldn't make it due to unavoidable reasons. So, he creates a post where he uploads photos and some description on his experience. He also rates the event as 4 stars of 5. Helen, who also attended the event, commented on Jeff's post that she loved it.
Diagram	<pre> sequenceDiagram     actor Tom as Tom (Registered User)     participant ReviewEvents as Review Events     ReviewEvents-&gt;&gt;Tom: View group     ReviewEvents-&gt;&gt;Tom: View past events     ReviewEvents-&gt;&gt;Tom: Upload photo     ReviewEvents-&gt;&gt;Tom: Comment     ReviewEvents-&gt;&gt;CreatePost: Create Post     ReviewEvents--&gt;&gt;CreatePost: &lt;&lt;Include&gt;&gt;     </pre> <p>The diagram illustrates the 'Review Events' process. An actor, Tom (Registered User), interacts with a system boundary labeled 'Review Events'. Inside this boundary, there are five use cases: 'View group', 'View past events', 'Upload photo', 'Comment', and 'Create Post'. Tom is connected to the first four use cases by solid lines. A solid line also connects 'View group' to 'Create Post'. A dashed line with the stereotype '&lt;&lt;Include&gt;&gt;' connects 'Upload photo' to 'Create Post'.</p>

Title	2.10 Grouping together friends list)
Actors	Parent of two kids and one dog
Description	Mary has a dog Ninja, a son Max, and a daughter Cindy. Her kids are of different ages, Max 5 and Cindy 15. Because of this they mostly have different friend groups that do different activities, but they also share a small number of friends. Some of her kid's friends like going to the park with their dog so that they can all play together. Mary wants to be able to group different friends together so that she can keep track of which kids are friends of one of her kids or both.
Diagram	<pre> graph LR     subgraph "Add and organize friends"         UC1([Add dependents pet, children])         UC2([Search for friends])         UC3([Add friends])         UC4([Create friend groups for each dependent])     end     Mary((Mary))     Max((Max))     Ninja((Ninja))     Cindy((Cindy))     Mary --- UC1     Mary --- UC2     Max --- UC3     Ninja --- UC3     Cindy --- UC3     Max --- UC4     Ninja --- UC4     Cindy --- UC4 </pre> <p>The diagram illustrates a system for managing friends and dependents. It features four actors: Mary, Max, Ninja, and Cindy. Mary is the parent of Max and Cindy, and Ninja is her dog. The system includes four use cases: 'Add dependents (pet, children)', 'Search for friends', 'Add friends', and 'Create friend groups for each dependent'. Mary is associated with the first two use cases. Max, Ninja, and Cindy are all associated with the 'Add friends' use case. Additionally, Max, Ninja, and Cindy are all associated with the 'Create friend groups for each dependent' use case.</p>

Title	2.11 Report content or user
Actors	Ashley(Registered User), Frank (Registered User), Support
Description	<p>Ashley was invited to an event for a pool party for the kids. She noticed that Frank posted something about alcoholic beverages being brought to the event. Ashley doesn't think that it is appropriate for Frank to bring alcohol to the event so she reports the content to the event creator, Nea. This report was not a serious report to the app so Ashley decided to report only to Nea and not PlayDate. After the event Frank continued to irritate others in the group and this annoyed Nea and she decided to report Frank to PlayDate.</p> <p>Nea was given a notice about the report so that the posts could be double checked by her and she can decide if she thinks the subject is appropriate for the event or not.</p>
Diagram	<pre> graph LR     subgraph "Report content or user"         UC1([Decides on Permanent Ban])         UC2([Report to Support serious offense])         UC3([violates no alcohol rule])         UC4([Remove Group User/delete Post])         UC5([Report incident/ NotifyGroup Admin])         UC6([proof])         UC1 --- UC2         UC2 --- UC3         UC3 --- UC4         UC4 --- UC5         UC5 --- UC6     end     Nea[Nea(Event creator/Admin)]     Frank[Frank(Event violation)]     Ashley[Ashley(Concerned User)]     Support[Support(PlayDate)]     Nea --- UC2     Nea --- UC4     Frank --- UC3     Ashley --- UC5     Ashley --- UC6     Support --- UC1 </pre> <p>The diagram illustrates the 'Report content or user' process. It features a central box containing six use cases: 'Decides on Permanent Ban', 'Report to Support serious offense', 'violates no alcohol rule', 'Remove Group User/delete Post', 'Report incident/ NotifyGroup Admin', and 'proof'. The actors involved are Nea (Event creator/Admin), Frank (Event violation), Ashley (Concerned User), and Support (PlayDate). Nea is connected to 'Report to Support serious offense' and 'Remove Group User/delete Post'. Frank is connected to 'violates no alcohol rule'. Ashley is connected to 'Report incident/ NotifyGroup Admin' and 'proof'. Support is connected to 'Decides on Permanent Ban'. The use cases are interconnected in a sequential flow: 'Decides on Permanent Ban' leads to 'Report to Support serious offense', which leads to 'violates no alcohol rule', then to 'Remove Group User/delete Post', then to 'Report incident/ NotifyGroup Admin', and finally to 'proof'.</p>

Title	2.12 Current events page
Actors	Parent for two kids and a dog
Description	Joe has a bunch of different events coming up that he RSVPed to as “going” but doesn’t want to have to search past all the events that he has listed in general, ie. ones that he responded to as “interested” or “maybe”. So, he goes to current events which lists only the events that he has RSVPed
Diagram	<pre> graph LR     subgraph Event_Management [Event Management]         direction TB         Set_Interested([Set Interested])         Set_Maybe([Set Maybe])         RSVP([RSVP])         View_Current_Events([View Current Events])     end     Joe((Joe(Registered User))) --- Set_Interested     Joe --- Set_Maybe     Joe --- RSVP     Joe --- View_Current_Events </pre>

Title	2.13 Favorite events
Actors	Tim (Registered User)
Description	Tim loves the app and has already gone to many events. He wants a way to look back at not only his past events but to have an easy way to look back on all his favorite past events. He should be able to create a list of favorites including past and present.
Diagram	<pre> graph LR     subgraph Favorite_Events [Favorite Events]         UC1([Create current Favorites list])         UC2([Save Event])         UC3([Search for past events gone to.])     end     GU[Group User]     GU --&gt; UC1     GU --&gt; UC2     GU --&gt; UC3 </pre> <p>The diagram is a UML Use Case Diagram. It features a stick figure actor on the left labeled "Group User". To the right of the actor is a rectangular box titled "Favorite Events". Inside this box are three oval-shaped use cases. The top use case is labeled "Create current Favorites list", the middle one is "Save Event", and the bottom one is "Search for past events gone to.". Three lines connect the "Group User" actor to each of the three use cases, indicating that the user can interact with all three functions.</p>



Title	2.14 Chat with other users in the group
Actors	Tom (Registered User), Jack(Registered User)
Description	Tom has 2 dogs and is a long-time user of PlayDate. He loves to share photos of his new dog fluffy. So, he posts the photos in his group chat. In response to that Jack shared photos of his dogs too and many commented with heart emojis.
Diagram	<pre> graph LR     subgraph GroupChat [Group Chat]         Post(Post)         UploadPhoto(Upload Photo)         addComment(add comment)         AddEmoji(Add Emoji)         Post -.-&gt; &lt;&lt;include&gt;&gt;  UploadPhoto     end     Tom((Tom)) --&gt; Post     Tom --&gt; UploadPhoto     Tom --&gt; addComment     Tom --&gt; AddEmoji     Jack((Jack)) --&gt; addComment     Jack --&gt; AddEmoji </pre> <p>The diagram illustrates the interactions between two actors, Tom and Jack, within a 'Group Chat' system boundary. Tom, represented by a stick figure with a blue head, initiates several actions: posting, uploading a photo, adding a comment, and adding an emoji. Jack, represented by a stick figure with a red head, also adds comments and emojis. The 'Post' use case (blue oval) includes the 'Upload Photo' use case (blue oval) via a dashed arrow labeled '&lt;&lt;include&gt;&gt;'. The 'add comment' use case (red oval) is a central point of interaction for both users. The 'Add Emoji' use case (blue oval with a dashed border) is the final action in the sequence for both users.</p>

### 3. Main data items and entities

- 3.1. **General users:** Can view, search public events of organizations but not public events created by users.
- 3.2. **Term of Service:** General user who wants to register PlayDate shall sign the term of Service.
- 3.3. **Registered users:** Can view, post, edit, delete event activities, join groups, and sign up for public user activities.
- 3.4. **Admin:** Admin is responsible for background-checking when a user registers the “PlayDate” system. Admin shall also check appropriateness of posts and can delete inappropriate posts and remove users.
- 3.5. **Group users:** Users who have joined a specific group and have more privilege than general users in terms of viewing and subscribing to group events which are private to the group.
- 3.6. **Group Admin:** Administrator of a group, which was created by him/her and has rights to add and remove group users of that group.
- 3.7. **Advertisers:** advertisers can post ads and promotional activities which are related to Children or Pets.
- 3.8. **Account:** general users can register the “PlayDate” system, and every user will have an account.
- 3.9. **Roles:** including general user, registered user, admin, group user, and group admin. Every user has an account and a role.
- 3.10. **Police:** Police contact will be the emergency contact when user needs emergency assistance
- 3.11. **Group:** Group is where people of similar interests form a circle to create and attend events together.
- 3.12. **Service Team:** Service team is the support team with whom the users can connect in case of any issues with application
- 3.13. **Technical Staff:** work on technical issue users meet
- 3.14. **Seeders:** available locations for children/pets hang-out, like parks, libraries, bookstores, and museums, and upcoming public events. These seeders are posted for general users to view and do a search.
- 3.15. **Events:** An event is a combination of date and place where a group or collection of users can meet.
- 3.16. **Group Event:** An event tied to a specific group.
- 3.17. **Public Event:** An event with a built-in group to track its users.
- 3.18. **Event Admin:** A user who can moderate an event.
- 3.19. **Post:** A piece of user-generated content attached to a group or event.
- 3.20. **Comment:** A piece of user-generated content attached to a post.
- 3.21. **Dependents:** Children or pets that are under the purview of a user.

## 4. Functional requirements

- 4.1. A general user shall be able to review public events.
- 4.2. A general user shall be able to contact PlayDate support.
- 4.3. A general user shall be able to search for public info.
- 4.4. A general user shall be able to register.
- 4.5. A general user shall be able to upload proof of the parent of a kid or pet.
- 4.6. A registered user shall be able to log in.
- 4.7. A registered user shall be able to review public info.
- 4.8. A registered user shall be able to search for public info.
- 4.9. A registered user shall be able to edit a profile.
- 4.10. A registered user shall be able to upload a profile photo.
- 4.11. A registered user shall be able to view other users created events that are public in the application
- 4.12. A registered user shall be able to browse public user events.
- 4.13. A registered user shall be able to comment on other users' posts.
- 4.14. A registered user shall be able to sign up for events created in the group that he/she is part of.
- 4.15. A registered user shall be able to save events as favorites.
- 4.16. A registered user shall be able to report inappropriate content in group to the group Admin
- 4.17. A registered user shall be able to look for past events they had signed up.
- 4.18. A registered user shall be able to create public events.
- 4.19. A registered user shall be able to create private events
- 4.20. A registered user shall be able to edit their own post.
- 4.21. A registered user shall be able to delete the event created by them.
- 4.22. A registered user shall be able to unsubscribe from the event that user signed up earlier.
- 4.23. A registered user shall be able to log out from the application.
- 4.24. A registered user shall be able to create a group.
- 4.25. A registered user shall be able to search for groups based on search criteria of location.
- 4.26. A registered user shall be able to search for groups based on search criteria of interest.
- 4.27. A registered user who is part of a group shall be able to view a heatmap of the group schedule.
- 4.28. A registered user shall be able to request to join a group.
- 4.29. A registered user who receives a notification regarding the creation of a group event shall be able to sign up for the event through the notification.
- 4.30. A registered user shall be able to view events planned by users of the group they are a part of.
- 4.31. A registered user shall be able to send out public event invites to a filtered user set.
- 4.32. A registered user shall be able to filter public events by location
- 4.33. A registered user shall be able to filter public events by category of child/pet.
- 4.34. A registered user who has attended events shall be able to view attended events,

- including already elapsed events.
- 4.35. A registered user who has access to an event shall be able to view the attendees of that event.
  - 4.36. An event attendee shall be able to invite other users to a group.
  - 4.37. A registered user shall be able to add 2 emergency contacts
  - 4.38. A registered user shall be able to edit emergency contacts
  - 4.39. A registered user shall be able to raise emergency request in emergency
  - 4.40. A registered user shall be able to add dependents, children, or pets, to their profile
  - 4.41. A registered user shall be able to search for friends by username
  - 4.42. A registered user shall be able to search for friends by email
  - 4.43. A registered user shall be able to search for friends by location
  - 4.44. A registered user shall be able to add friends to their account
  - 4.45. A registered user shall be able to organize their friends lists into different groups in relation to their dependents
  - 4.46. A registered user shall be able to give a name to their friends list.
  - 4.47. A registered user shall be able to create surveys/polls and submit as a post
  - 4.48. A registered user who attended an event shall be able to see the results of a survey
  - 4.49. shall be able to edit a survey
  - 4.50. A registered user who creates a comment shall be able to delete their comment.
  - 4.51. A registered user can deregister.
  - 4.52. A registered user who attended an event shall be able to respond to surveys by clicking on a survey option
  - 4.53. A registered user who is the event creator shall be able to delete a survey on his event.
  - 4.54. A registered user who is the survey creator shall be able to delete a survey on his event.
  - 4.55. A registered user shall be able to share photos as posts in group chats
  - 4.56. A registered user shall be able to respond with a photo
  - 4.57. A registered user shall be able to comment on posts by other users which are accessible to them.
  - 4.58. A registered user shall be able to react with emojis on posts by other users which are accessible to them.
  - 4.59. A registered user shall be able to save Events by favoriting them
  - 4.60. A registered user shall be able to search through event history
  - 4.61. A registered user shall be able to search through favorites using search bar
  - 4.62. A registered users should be able to filter RSVP'd events
  - 4.63. A registered user shall be able to add children as dependents on their profile.
  - 4.64. A registered user shall be able to add pets as dependents on their profile.
  - 4.65. A registered user shall be able to add friends to their friend list.
  - 4.66. A registered user shall be able to label their friends lists into different groups.
  - 4.67. A registered user shall be able to accept event invitations.
  - 4.68. A group admin shall be able to invite a registered user to their group.
  - 4.69. A group admin shall be able to delete posts of other users in groups.
  - 4.70. A group admin shall be able to remove users from the group.
  - 4.71. A group admin shall be able to add a registered user into the group.
  - 4.72. A group admin shall be able to delete group posts.
  - 4.73. A group admin shall be able to remove group members.
  - 4.74. A group user shall be able to comment on group posts.

- 4.75. A group user shall be able to sign up for group events.
- 4.76. A group user shall be able to search for group events.
- 4.77. A group user shall be able to create group events.
- 4.78. A group user shall be able to edit his/her own post.
- 4.79. A group user shall be able to delete the event created by them.
- 4.80. A group user shall be able to quit from a group.
- 4.81. A group user shall be able to post photos about past events in the group.
- 4.82. A group user shall be able to receive notification when a new group event is created.

## 5. Non-functional requirements

- 5.1. PlayDate org shall do background-checking when a user registers PlayDate.
- 5.2. General User shall receive an update on his/her background verification in less than 24 hours of registering on PlayDate.
- 5.3. Every user shall sign PlayDate Terms of Service and Privacy when they register.
- 5.4. Admin shall sign an agreement to be responsible for appropriate data sharing in groups.
- 5.5. Users violating PlayDate Terms of Service shall be warned for the first time and removed for the second time.
- 5.6. Users shall receive online help from support for any clarification on the application.
- 5.7. User raised issues shall be emailed to corresponding point of contact of support team in less than 1 min.
- 5.8. Service Team shall respond to users within 12 hours of raising request.
- 5.9. Once the service team receives reports on inappropriate posts or technical issues, they shall send a notification to an admin or technical team in 30 minutes.
- 5.10. Technical team shall respond to the notification sent by the service team within 12 hours and send a notification to the service team once the issue is solved.
- 5.11. Service Team shall change the status of any issue raised by the user only after the user confirms.
- 5.12. Information should be securely transmitted to the database server without any changes in information.
- 5.13. Users shall receive online help from support for any clarification on the application
- 5.14. Application shall be supported on Mac via browsers Chrome, Safari, Firefox
- 5.15. Application shall be supported on Windows via browsers Chrome, Firefox, Microsoft Edge
- 5.16. Application shall use googleapis to find nearby places to visit.

## 6. Competitive analysis

Competitor/ Feature	510 family	Meetup.com	Facebook events	Nextdoor	Play:Date
<b>Strengths</b>	<ul style="list-style-type: none"> <li>Events available with information on the front page.</li> <li>Easy interface set by different topics by age, location, activities</li> </ul>	<ul style="list-style-type: none"> <li>Able to create groups, public/private events</li> <li>Able to find groups, people, events pertaining to certain specifications (age, interests, friends)</li> <li>Notification System</li> <li>Messaging System</li> <li>local guides: informational posts that can help fuel tourism.</li> <li>Reporting System that can help mitigate against unsafe posts and members</li> <li>Multiplatform (web, ios, android)</li> </ul>	<ul style="list-style-type: none"> <li>Large user base, offers a variety of different content and events</li> </ul>	<ul style="list-style-type: none"> <li>Local News and connection suggestions.</li> <li>Strong community engagement</li> </ul>	<ul style="list-style-type: none"> <li>Easy to learn, good onboarding, kid-oriented</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>Restricted to specific area</li> </ul>	<ul style="list-style-type: none"> <li>Pricing restrictions</li> <li>Website requires no identity verification.</li> </ul>	<ul style="list-style-type: none"> <li>Too many ads</li> </ul>	<ul style="list-style-type: none"> <li>Restricted to surrounding area</li> </ul>	<ul style="list-style-type: none"> <li>Mobile only, swipe system means one match at a time, profiles may be far away, simple chat</li> </ul>
<b>Pricing</b>	<ul style="list-style-type: none"> <li>Free</li> </ul>	<ul style="list-style-type: none"> <li>Free-Tier</li> <li>Paid-Tier</li> </ul>	<ul style="list-style-type: none"> <li>Free</li> </ul>	<ul style="list-style-type: none"> <li>Free</li> </ul>	<ul style="list-style-type: none"> <li>Free</li> </ul>

		<ul style="list-style-type: none"> <li>Option 1: \$14.99/month for a group upto 50 members and 3 co-organizers</li> <li>Option 2: \$19.99/month with no restrictions</li> </ul>			
<b>Security</b>	<ul style="list-style-type: none"> <li>Email only</li> </ul>	<ul style="list-style-type: none"> <li>Simple login through Google, Apple, Facebook</li> </ul>	<ul style="list-style-type: none"> <li>Two-factor authentication and encrypted messaging with FB Messenger</li> </ul>	<ul style="list-style-type: none"> <li>Simple login through Google, Apple or Facebook</li> </ul>	<ul style="list-style-type: none"> <li>All you need is a phone number</li> </ul>
<b>Social Media</b>	<ul style="list-style-type: none"> <li>Facebook, Instagram, Pinterest, and twitter</li> </ul>	<ul style="list-style-type: none"> <li>Strong social media (Instagram, FB,) presence in alignment with current-day diversity standards.</li> </ul>	<ul style="list-style-type: none"> <li>One of the most used social media platforms that also owns other popular social media platforms, like Instagram</li> </ul>	<ul style="list-style-type: none"> <li>Local news and comments are like Facebook for community</li> </ul>	<ul style="list-style-type: none"> <li>Pic, age, general location, likes/dislike (thorough on this)</li> </ul>
<b>Onboarding experience</b>	<ul style="list-style-type: none"> <li>Events information from locals or paid sponsors</li> </ul>	<ul style="list-style-type: none"> <li>Modular and easy to follow website</li> </ul>	<ul style="list-style-type: none"> <li>Helpful hints and pop-up bubbles</li> </ul>	<ul style="list-style-type: none"> <li>Easy to create and look up local events</li> </ul>	<ul style="list-style-type: none"> <li>Tutorial slides and profile creation sequence.</li> </ul>



Features	510 family	Meetup.com	Facebook events	Nextdoor	Play:Date	PlayDate
Private and public events	++	++	+	++	-	++
Reporting & Moderation	+	++	++	+	+	++
Privacy & Visibility Tools	-	++	+	+	-	+
Emergency Tools	-	-	+	+	-	++
Communication	++	++	++	+	+	+
Contact Suggestions	++	++	++	++	++	+
Data Security	-	+	+		-	++
Usability & Flexibility	+	++	++	+	++	++
User Verification	-	-	+	-	+	++

++ Superior +Feature present -Feature doesn't exist

## Analysis

- We observed that the scope of target audience is generic in most of the competitors making them less focused and customized to specific groups of audience. On those lines, PlayDate stands out in terms of our target audience being only parents of kids and pets, which will help us in better catering to their requirements.
- Since our indirect audience includes kids and pets, safety plays an important role. To enhance the safety, we provide user addition on the application via background verification and invitees only. This adds a layer of protection from unsafe users. This feature is not found in any of our competitors.
- Like most other competitors, PlayDate doesn't charge their users on signing up or creating groups. Instead, the revenue model lies on the advertisements in the application.

## 7. High-level system architecture and technologies used

- **Client Layer**

- Users can access the application via browser using web url <http://34.168.80.213:8000/home/about/> which is accessible from on premise as well from google cloud.
- Users can access limited functionalities of the application directly which includes About page, public events and Support.
- To be able to access all the functionalities, the user can Register and Login on the web application, post which user will have access to Profile, Groups, Group & Private Events, depending on the role of the user.
- Users can only interact with the user interface and cannot access business logic or any data stored on the server.

- **Server Layer**

- Web application is hosted on Google compute engine on Google cloud. Here the business logic of the web application is stored.
- Web application uses Django Framework. Django framework routes the url to the respective user interface (views).
- Business logic performs read, write, update and delete operations on the Data Layer via MySQLclient connector in mysql.connector.django
- Googleapis will be used for recommendation logic of nearby places

- **Data Layer**

All the application & user data is stored on the MySQL database. MySQL server resides on the same server as the web application, which increases speed of operations.

Sensitive data like passwords, proof shared by users will be encrypted and stored on the server.

Server stores information like:

- User
  - Personal Identification Data: Name, Date Of Birth, Address, Profile photo, proof for background verification
  - Authentication details: Username, Password, gmail account
  - User shared data: Images, Text, event demographics
  - Permissions
- Public Events- Event information from google maps
- Groups- Demographics
- Advertisement Details
  - Text / Media
  - Vendor Details

## Software stack

- Compute server: Google Compute Engine
  - Name: team03-main-01
  - Machine-type: e2-micro
  - vCPU: 1 shared core
  - Memory: 1gb Storage: 30gb
  - OS: Ubuntu 18.04
- Web server: Gunicorn 20.1.0
- Database: MySQL 8.0.29
- Server-side language: Python 3.10 with Django 4.0.5 Framework
- Front-end: Bootstrap 5
- IDE: VisualCode
- Version Control: GitHub

## 8. Checklist

- 8.1. Team found a time slot to meet outside of the class Github master chosen
  - Done
- 8.2. Team decided and agreed together on using the listed SW tools and deployment server
  - Done
- 8.3. Team ready and able to use the chosen back and front end frameworks and those who need to learn are working on learning and practicing
  - Done
- 8.4. Team lead ensured that all team members read the final M1 and agree/ understand it before submission
  - Done
- 8.5. GitHub is organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.)
  - Done

## 9. Team contribution

Name	Role	Contribution
Soujanya Ravindra Nayak	Team Lead Document Contributor	<ul style="list-style-type: none"> <li>- Organized meetings and brainstormed project ideas and implementation.</li> <li>- Created initial django project skeleton and pushed it to github.</li> <li>- Created a view for About Page and view page for my bio.</li> <li>- Proof verified web application.</li> <li>- Contributed to M1 document in format, summary, use cases, diagrams, functional &amp; nonfunctional requirements, and system architecture.</li> <li>- Distributed tasks. Monitored timely completion of tasks by the team members. Organized Team meetings to discuss the points raised in task by each one and updated and improved with team agreement.</li> </ul>
Margaret De La Torre	Front-end lead Document Contributor	<ul style="list-style-type: none"> <li>- Helped brainstorm ideas for project</li> <li>- Helped write use cases, diagrams, and requirements</li> <li>- Helped with reminding the team about use cases needing to be more like stories rather than short descriptions</li> <li>- Helped with competitive analysis</li> <li>- Contributed to group discussions during team meeting</li> </ul>
Martin Salvatierra	Front-end Document Contributor	<ul style="list-style-type: none"> <li>- Applied three brainstorming topics for full application</li> <li>- Helped to write 2 use case diagram creation, and requirements</li> <li>- Addition of three functional requirements</li> <li>- Ask for elaboration on multiple parts of project during team meetings</li> <li>- Going over JavaScript, html, CSS, bootstrap for future</li> <li>- over 10 hours of python practice on own to learn python</li> <li>- filled in about me page</li> </ul>
Andy Cho	Back-end lead Document Contributor	<ul style="list-style-type: none"> <li>- Applied constructive criticism to brainstorming topics</li> <li>- Helped write use cases, diagrams, and requirements,</li> <li>-Helped productivity by taking availability-schedules, posting resources</li> <li>- Created cloud server with necessary software to match our project needs</li> <li>- Helped with competitive analysis</li> </ul>
Qin Geng	Front-end	<ul style="list-style-type: none"> <li>- Finished two use cases (2.1 and 2.2) with diagrams and</li> </ul>

	Document Contributor	<p>contributed to corresponding entity list, functional requirements, and non-functional requirements.</p> <ul style="list-style-type: none"> <li>- Wrote the first version of the “about us” django application to help team members learn about django projects. Also modified the second version application to help team members get a unified template to work on.</li> <li>- With help from the back-end lead, wrote an instruction document on how to deploy our application on a google cloud server step by step to help team members understand the deployment procedure.</li> <li>- Engaged in every team meeting, contributed to brainstorm ideas and problem discussion.</li> </ul>
William Plachno	Back-end Team Document Contributor	<ul style="list-style-type: none"> <li>- Helped with use cases</li> <li>- Made use case diagrams for UC2.4, UC2.5, and UC2.8</li> <li>- Edited document</li> <li>- Contributed to group discussions during team meetings</li> <li>- Filled in about me page</li> <li>- Added and edited data entities and requirements</li> <li>- Helped with conceptualizing data entities and requirements</li> <li>- Downloaded and reviewed Play:Date app for Competitive Analysis</li> </ul>
Victor	Git Master Front-end Document Contributor	<ul style="list-style-type: none"> <li>-helped brainstorm ideas on project</li> <li>-contributed on cast studies</li> <li>-wrote and pushed about me</li> <li>-participated and contributed to meetings that was able to attend but was caught up on chats either in groups or individual messages.</li> <li>-contributed to use cases 2.12 and 2.14 and made the diagrams</li> </ul>