Team Member Information:

We are the offline-video-editiing team. We are working on the application Zooom, which is an application to help Referees learn and improve their officiating.

Members:

- Jaden Drury
- Hunter Line
- Jacob Goelz
- Samuel Guernsey
- Mentor- Austin Biggs

Client Information:

Client Name:

- Kyle Armstrong

Kyle is wanting us to make his current online desktop application to be used offline. His application is called Zooom and this application helps referees train and look at fouls that should or should not have been called.

Business Requirements:

1. **BR1**
    - We want to allow users to use the editing features of our current platform (telestrations, audio overlay, etc.) offline
    - This is a business requirement because one of the current issues that users have with the Zooom platform is that they must have an internet connection in order to use it. If users are in an area where the wifi is poor or non-existent they are unable to complete any work.
2. **BR2**
    - Reduce overall video size, so that when a video is uploaded to the server it takes less time.
    - If a user has a video of an entire game that they wish to edit they have to upload the entire file to the Zooom servers before editing. Depending on the file size this can take a very long time. Since one of the editing tools is the ability to “clip” videos to make them shorter, doing so offline would allow for smaller videos and a shorter upload time since the user will only be uploading the shortened clipped video.

3. **BR3**
    - Application must visually resemble current online application
    - The client expressed that much of the work that they've had to do with their clients is the hard transition to technology in the first place. Many of the clients are deemed as not being tech savvy and the current platform has been carefully designed so that it works in an understandable way for them. We need to keep the new system as visually similar as possible so that users don't have to re-learn a new platform entirely to do the same functions they are currently doing.
4. **BR4**
    - Create a video format so that users can play it offline.
    - Many of the clients have expressed that they would like the ability to play the videos offline when they're on fields, or in classrooms without stable interest connections. Currently the videos are only playable if you have a connection to the Zooom website.
5. **BR5**
    - Users can tag videos with either pre-definied or user generated tags to allow the ability to search and improve the overall search functionality.

Use Cases:

Actors

- **Refs**
    - Officials on the field during a game
- **Refs in training**
    - Officials in training for a sport
- **Coaches**
    - Coaches that are from schools to see what the Officials are calling penalties
- **Players**
    - Players can look at why the penalty was called on them.
- **Heads of Officiating**
    - Officials that enforce the rules and can say if the penalty was indeed a penalty
- **Employees**
    - Employees of Zooom

Use Cases

UC-0: Example

- **Paragraph Explanation**
- **Actors involved**
- **Flow of Use Case**
- **Link to Business Requirment**
- **UC-1: Application can be used offline**
    - This is one of the use cases because this is the primary goal of the application. The client wants to be able to use the application offline with the features that are used online. Another reason this a use case is because according to the client, users have been wanting their application to be used offline.
    - All Actors link to this Use Case
    - If you are on a plane or don't have wifi, you can open your laptop and use the application offline. You can clip a video, do a voice recording, do a telestration, and create slides.
    - This would go with Business Requirement BR1
- **UC-2: If need be; be able to take a 3hr long video and condense it into clips that are needed**
    - This is a use case because it is a feature that was discussed with the client in the original meeting. Another reason that this is a Use Case is because the client discussed having longer videos being decreased so that they can upload faster. Another reason that this is a Use Case is because this would help keep down cost and increase upload speed of the videos.
    - All Actors are linked to this Used Case
    - In this Use Case, you would upload a video, go through the video clip sections that you want and they would be added to the queue of clips, then you can choose what clips to upload and those clips will be uploaded.
    - This would go with Business Requirement BR2
- **UC-3: Better mobile application use**
    - The reason that this is a Use Case is because the mobile application on both iOS and Android are not that great. On iOS, there is basically no app. The menu is blacked out but there are still buttons that log you off or there is an about page.

For android it is just a copy of the desktop application, which runs poorly.

    - All Actors are linked to the Use Case

    - Let's say that you want to look at a video that you uploaded to the desktop version of the application and you want to view it on your phone. I would be able to look at the video on the app and be able to use the same tools as the desktop version. Also, I can view the videos offline so that I am always able to review a video. Lastly, the menu on the app should be able to navigate cleanly and has a nice look.

    - This would go with Business Requirement BR1 and BR3

- **UC-4: Adding Survey to a clip**

    - This is a Use Case because this goes along with one of the requirements of our application. Another reason is because it could be completed as its own requirement during the development of the application. Also, this Use Case would allow there to be a quiz or survey at the end of the clip to see what other people would think.

    - All Actors are linked to the Use Case

    - Let's say you are looking at a clip of a holding call in football. You could go to a toolbar and hit Survey to conduct a survey seeing if the call was a holding call to otter people. This survey would be answered after the video is uploaded and other people can see it.

    - This would go with Business Requirement BR1

- **UC-5: Use telestrations**

    - This is a Use Case because it goes along with one of the requirements for our application. Another reason is because this feature could be a solo feature designed for our application. What that means is that this feature could be the only feature of the application. Also, this is a Use Case because the client wants to keep the look of the original desktop application to our application.

    - All Actors are linked to the Use Case

    - Let's say that you are looking at a clip that has a pass interference call (from football) and you wanted to point out where the foul occurs. You can use the telestration tool to point to the spot to where the foul occurs. The video would

pause when it showed the telestration.

    - This would go with Business Requirement BR1

- **UC-6: Add Slides to a video**

    - This is a Use Case because this is a key requirement of the application. Another reason is because this feature allows the users to make comments in a clip or give a rule from a rule book. Also, this would follow how the client wants our application to look as much like their current desktop application. Lastly, it would be a feature for all actors of the application.

    - All Actors are linked to the Use Case

    - Let's say that you are looking at a clip and you want to add information or your own thoughts about something in a text format. You would go to the toolbar and click on the Slides tool. Then, you would type in the regulation or your thoughts at the time stamp that you want them to play and then hit a button to submit them. If you go through the video the slide will pop up and tell you what a person thought or a rule from the rule book if need be.

    - This would go with Business Requirement BR1

- **UC-7: Add Voice Overs**

    - This is a Use Case because this is a key requirement of the application. Another reason is because this feature allows the users to make voice overs in a clip. Also, this would follow how the client wants our application to look as much like their current desktop application. Lastly, it would be a feature for all actors of the application.

    - All Actors are linked to the Use Case

    - Let’s say that you don’t want to add slides to a video or want to give an explanation with words. You would go to the toolbar and click the Voice Over tool. Here you would hit a record button and give a 60 second voice over to tell your thoughts. Also, you can put a timestamp at where you want the voice over to play. Afterwards, you would hit a button and submit the voice over. Now the voice over will be in the video and stops wants it gets to where you placed it in the video.

    - This would go with Business Requirement BR1

Requirements:

Functional Requirements

- FR1
    - Application can be used offline on Windows
    - Priority: High
    - BR1
- FR2
    - Application can be used offline on Mac
    - Priority: High
    - BR1
- FR3
    - Application can be used offline on Android
    - Priority: High
    - BR1
- FR4
    - Application can be used offline on iPhone
    - Priority: High
    - BR1
- FR5
    - Can add telestrations to videos, which are saved
    - Priority: Medium
    - BR1
- FR6
    - Can add voice over to videos (max of 60 seconds)
    - Priority: Medium
    - BR1
- FR7
    - Can clip a video
    - Priority: High
    - Business BR1
- FR8

    - Can add slides to a video (slides are like full screen text overlays)
    - Priority: Medium
    - BR1
- FR9
    - Can add polls to a video
    - Priority: Medium
    - BR1
- FR10
    - Can clear telestrations from a videos
    - Priority: Medium
    - BR1
- FR11
    - Can clear voice over from videos
    - Priority: Medium
    - BR1
- FR12
    - Can clear slides from a video
    - Priority: Medium
    - BR1
- FR13
    - Can clear surveys from a video
    - Priority: Medium
    - BR1
- FR14
    - User can upload a video from the offline application to the online application
    - Priority: High
    - BR1
- FR15
    - Users can authenticate to the Zooom account via offline application
    - Priority: High
    - BR1
- FR16
    - Users can download and install a Windows application
    - Priority: High
    - BR1

- FR17
    - Users can download and install a MacOS application
    - Priority: High
    - BR1
- FR18
    - Users can download and install a IOS application
    - Priority: High
    - BR1
- FR19
    - Users can download and install a Android application
    - Priority: High
    - BR1
- FR20
    - Users can add additional information about the video (Home Team, Away Team, Game #, Title, Sport, Level, Location, and Video Description.
    - Priority: Medium
    - BR5
- FR21
    - Users can pick from pre-selected information instead of open ended text boxes.
    - Priority: Medium
    - BR5
- FR22
    - Users can create tags to apply to videos
    - Priority: Low
    - BR5
- FR23
    - Users can search by tags to find relevant videos
    - Priority: Medium
    - BR5
- FR24
    - Users can modify tags on videos.
    - Priority: Low
    - BR5

Non-functional Requirements

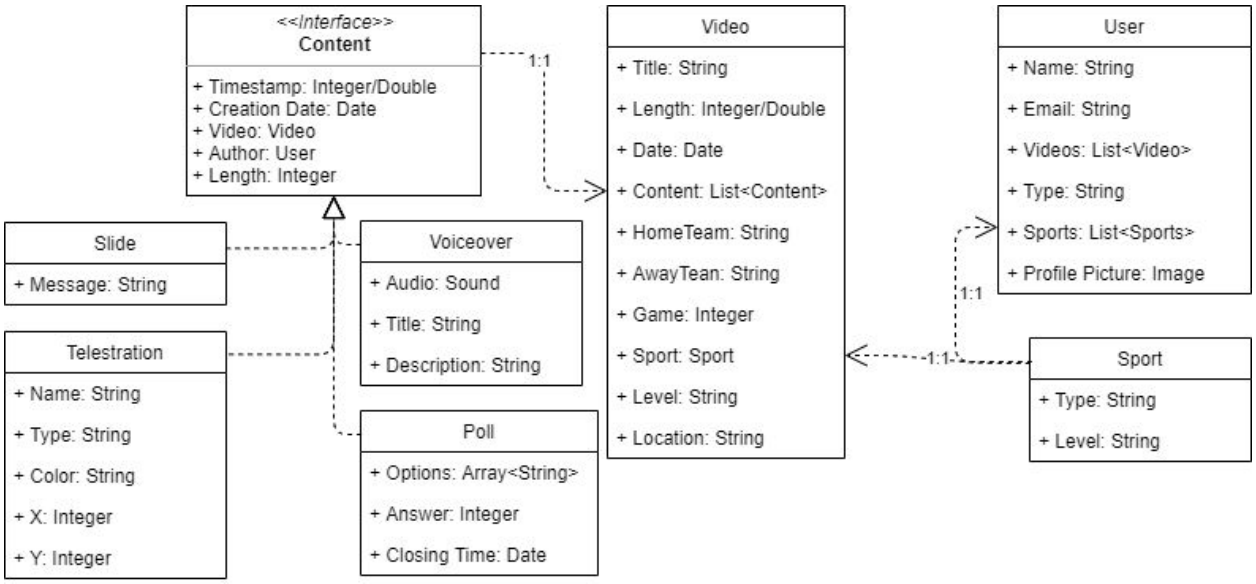
- NFR1
    - Faster upload time for videos
    - Priority: High
    - BR2

~~* NFR2 * Save a screenshot from current position in the video including any annotation on screen * Priority: None * BR1~~

~~* NFR3 * Stopwatch feature * Priority: None * BR1~~

- NFR4
    - Video Volume control (YouTube like)
    - Priority: Low
    - BR1
- NFR5
    - Any video clips that are uploaded together from a single video will be uploaded in a playlist
    - Priority: High
    - BR2
- NFR6
    - Product needs to be compliant with the Zooom App visual style guides.
    - Priority: Low
    - BR3
- NFR7
    - Video format will be exportable for use outside of Zooom offline app
    - Priority: Low
    - BR4

Domain Model:



User

- Name (String): The name of the user.
- Email (String): The email address of the user.
- Videos (List): The list of videos this user has uploaded.
- Type (String): The type of the account of the user (what features are available to them).
- Sports (List): The list of sports the user has added to their account (including level).

Sport

- Type (String): The type of sport the user added.
- Level (String): The level of skill of the user.

Video

- Length (Integer): The length of the video.
- Date (Date): The date/timestamp of the video.
- Content (List): The list of content added to the video (like slides, voiceover, telestration, tag, and polls).
- HomeTeam (String): The name of the home team which played.
- AwayTeam (String): The name of the away team which played.
- Game (Integer): The game number of the video.
- Title (String): The title of the video.
- Sport (String): Which sport was played.
- Level (String): The skill level of the event (middle school, high school, collegiate, etc.).
- Location (String): Where the event took place.

- Description (String): The description of the video/event.

Content

- Timestamp (Integer): The spot in which the content starts.
- Creation Date (Date): The date which the content was created.
- Video (Video): The video which includes the content.
- Author (User): The person who created the content.
- Length (Integer): The length the content displays.

Slide (implements Content)

- Message (String): The message to show during the video.

Poll (implements Content)

- Options (Array): An array of selections for the poll.
- Answer (Integer): The index of the Options array which is the correct option.
- Closing Time (Date): The date & time which the poll closes.

Voiceover (implements Content)

- Audio (Audio): The audio file of the voiceover.
- Title (String): The title of the voiceover.
- Description (String): The description of the voiceover (or captions).

Teletration (implements Content)

- Name (String): The name of the telestration.
- Type (String): The type of the telestration (line, square, circle, custom, etc.).
- Color (String): The color of the telestration.
- X & Y (Integers): The coordinates (x and y respectively) where the telestration is.

TechStack:

Xamarin (C# & .NET)

- Specified by the client to attempt to use. Can have cross platform so we're able to develop for Android, iOS, Windows, and MacOS.
- Xamarin

Microsoft Azure

- The cloud hosting provider for the client already, utilizing existing infrastructure where possible
- Microsoft Azure

Xamarin.Forms

- The graphical user interface for Xamarin to build cross platform applications on Android, iOS, Windows, and MacOS.
- Xamarin.Forms

Prototype:

Desktop Prototype Adobe XD Link:
https://assets.adobe.com/id/urn:aaid:sc:US:edf25bf7-1e69-4f4f-8035-f4bca1ce1979?view=difile

Mobile Prototype Adobe XD Link:
https://assets.adobe.com/id/urn:aaid:sc:US:dd988898-d74e-4d99-a66a-d5081f67e187?view=difile

Walkthrough Video Link: https://youtu.be/deZYueL4Yns

First Iteration Features:

Prepare the list of the **highest priority requirements that will exist in the first iteration**.

- **FR15:** Users can authenticate to the Zooom account via offline application
    - **BR1**
    - **Priority:🔴High**
- **FR16:** Users can download and install a Windows application
    - **BR1**
      Priority:🔴High

(Unofficial stretch goal)

Also platforms for the other apps
Being able to play a video
Being able to upload a video

Mentor Feedback:

Mentor stated that everything looked good and did not mention anything that needed serious change.

Client Feedback:

Client asked us to rework the requirement for the tag feature of their application. He just wants it as a clip like feature that just clips a certain part of a video. Also, he wanted the tags to be a drop down feature instead of the user typing in what they want.

Interesting Slide:

This is the wallpaper on my second monitor on my main computer and the main wallpaper on my laptop. This is a Venator-class Star Destroyer from Star Wars. The place that I got this wallpaper was from an application off of Steam called Wallpaper Engine. Wallpaper Engine has many wallpapers with animation. In the wallpaper on my computer, you can see lightning on the planet.