iReclaim

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ABSTRACT

This project consisted of creating an application called iReclaim, which runs on iOS devices. This application is designed to share uniquely generated videos by the company itself, Reclamation Studios. Users around the world can log on to this application and start watching videos posted by Reclamation Studios. This application helps set a common ground for individuals who desire to connect amongst each other. iReclaim is a blend between YouTube’s distinctive features such as streaming videos, watching them, and enjoying the ability to comment. Further, the app is combined with Facebook’s qualities such as possessing the freedom to share videos. This application is ready and will be available on the Apple Store.
ACKNOWLEDGMENTS

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INTRODUCTION

Reclamation Studios is a company that shoots purpose-oriented videos, designated for a specific audience, and shares them with the rest of the world through their YouTube channel, Facebook page, Twitter page, and Instagram page. The motivation behind this project was the lack of exposure the videos received. As a result, Reclamation Studios aims to expose the unrecognized videos instead of losing them among the tremendous number of videos that are being shared every minute. This project provides a platform for these specific videos known as the iReclaim app that Reclamation Studios will use to broadcast to the rest of the world. Users can use iReclaim to watch Reclamation Studios’ productions and contribute with their own opinions.

PROBLEM STATEMENT

Reclamation Studios was founded to captivate the attention of their peers with simple, shareable, digestible messaging that can genuinely inspire desired change. However, reachability
remains a challenge with their current platforms. Reclamation Studios aims to develop and promote a contemplative and competitive video communication landscape for their target group. As a startup and with the increased availability of online video content nowadays, Reclamation Studios faces numerous challenges. These hardships entail developing high brand recognition, continuously engaging their desired audience, and increasing the visibility and accessibility of their productions, while catering the needs of their on-the-go target group. The dissemination of high quality and engaging content requires tools. For example, YouTube and Facebook that ensures the delivery of this content to their audience through the right medium, at the right time. Relaying old-fashioned communication methods, and promotional emails compromises the visibility of this content, and ensure that they invest all their resources in their development.

Last year, half of all the data spent on mobile platforms were accounted towards videos [1]. While people are watching less and less TV, the popularity of online videos continues to rise. Online videos are a real attention grabber for the average person. In our ever-changing world, technology has become the constant companion for a company’s audience. Therefore, the company needs to be able to present their productions through an appealing and competitive portal. Even with all the video production, and content development capabilities they own at Reclamation Studios, their online and social media presence is still not sufficient enough to help them reach their maximum potential and achieve the vision they strive for. From the “Sharing is Caring” concept, they want individuals to be able to share their videos online among their friends and acquaintances. Sharing permits the attainability of their videos considerably broader.

Having their website and YouTube as the main delivery channels for their productions is not achieving the desired viewership outcomes they aim for. More than 700 YouTube videos are
shared every minute on Twitter and more than 500 videos are watched daily on Facebook [2], hence they want their videos to be more visible. In addition, displaying their videos on the Internet would allow them to overcome the barriers of distance, which is their major concern, and take advantage of the increasing weight of social media.

Reclamation Studios tried and are still trying to upload their videos to YouTube and Facebook, however the videos get lost amongst the enormous number of videos that are shared every minute. The company wants something different from YouTube; they desire a specific application that suits their particular needs. They want people to be able to download their videos to watch later. They want people to be constantly engaged in their videos; they want their audience to get notified every time there is a new video available. Additionally, YouTube is blocked in some countries; this means that those people in those countries cannot access the videos posted on YouTube. They want to involve these people with their videos. In addition, users cannot share videos/pictures on YouTube, and the company wishes to have the ability to post and share pictures among their users.

**REQUIREMENTS AND SPECIFICATIONS**

The application should require the users to sign up the first time they start up the app. When users begin using the application after the first time, the app should give them the options to login with a different account or to proceed with the current account. The application should give the user the option to logout and should remember that the user has logged out. Further, the application should login again the next time the user tries to start up the application. The logging in process should be via Facebook by using its login mechanism to allow the users to use the
application as quickly as possible. It should contain the following User Interfaces: a home interface, an uploading interface, and a settings interface.

The home interface, or the activity feed interface, should be populated with all the posts that have been uploaded to the back-end server by the company itself. Then, the user can explore and interact with the new posts. Users should be able to view, like, comment, and share new videos and pictures on their Facebook Timeline; they will not be allowed to upload videos and pictures. Each post consists of a video or picture and the comments and likes related to that video or picture. The uploading interface should allow an admin (user with high rank) to upload videos and pictures to the back-end server from his or her device. The settings interface should allow a user to look at the app’s settings like logging out, seeing the user’s rank, and reading about the company.

The app should have a “Gamification” feature to keep the users motivated and engaged with the application. This feature gives users different abilities based on their ranks and activities. The process of getting higher ranks is: each time a user likes a post, comments on a post, or shares a post, the user gains points. The user’s rank is based on the number of points he or she obtains. Depending on the user’s rank, new features are exposed. These features could include: getting notified if another user likes, comments, or shares a video the user previously engaged in. Another example of a feature may be: permission to access peeks at new videos before those videos get released to regular users (users with low ranks). When the user obtains a very high rank, the user can contribute to storyboards of future episodes or series made by the company or even upload videos and pictures himself.
The application should have the feature of pushing notifications on a regular basis. Users should be notified each time the company uploads a new video or other users comment and share a post you already liked (only for users with high rank).

**DESIGN APPROACH**

1. **Overview**

![Diagram of iReclaim app](image)

*Figure 1: Anatomy of iReclaim*

As Figure 1 shows, the user starts up the app and logs in via a Facebook application. The Facebook application is used to authorize a user and redirects its credentials and public information, such as user name and profile picture, back to the iReclaim app. The iReclaim app saves this information in the back-end server (Parse Framework) and presents the app’s home page to the user.

2. **Back-end Server**

The design of the application is based on the Parse Framework [5]. It uses the Parse Framework as a back-end server. iReclaim uses the Parse Cloud to save data and easily schedules recurring tasks with background jobs. The Parse Cloud makes storing data and
querying data easy. It also makes sending push notifications across devices and platforms easy enough and includes just a couple lines of coding. Using the Parse Framework allows developers to understand more about how people are using the app and measure the growth of the app over time.

The Parse Cloud is responsible for handling the entire backend of the project. It is responsible for the databases, the performance, and the scaling of the entire project. When the user first signs up, the application will store some of the user’s necessary Facebook information in the Parse Cloud. Then, the user is ready to use the application and start watching the videos, commenting on them, and sharing them, etc.

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**Figure 2: Users’ table**

Figure 2 shows a screenshot of the users’ table that lives in the Parse Cloud. Every time a new user logs in, a new record is created and inserted into the table above.
Figure 3: Videos + Photos table

Figure 3 shows a screenshot of the videos and photos table. Every time the company uploads a new video or photo, a new record is created and inserted into this table.

Figure 4: Activities' table

Figure 4 shows a screenshot of the Activities' table. Every time a user likes or comments on a post, a new record is created and inserted into this table.

3. Data Model

3.1. Photo Class

The Photo class contains an image and a thumbnail field of type “File”. Each time the company uploads a new image, a new instance of the Photo class is created and saved into the Parse Cloud. The “image” field stores the photo and the “thumbnail” field stores a thumbnail of
the photo. This improves the user’s experience and the overall performance in the activity feed table view where all the thumbnails of the uploaded videos and photos are displayed simultaneously. The process of creating the image thumbnail from the actual photo is done locally on the device side.

3.2. Video Class

The Video class contains a video and a thumbnail field of type “File”. Each time the company uploads a new video, a new instance of the Video class is created and saved in the Parse Cloud. The “video” field stores the video and the “thumbnail” field stores a thumbnail of the video as a photo to be displayed. This improves the user’s experience and the overall performance of the activity feed table view where thumbnails of all the uploaded videos and photos are displayed simultaneously. The process of creating the image thumbnail from the actual photo is done locally on the device side.

3.3. User Class

The User class makes everything easier for the logging in process. This class consists of “displayName”, “email”, “facebookId” fields of type “String”, “facebookFriends” of type “Array”, and “channel” of type “String”. Those properties are used to save the user’s information to the Parse Cloud. When the user first logs in, those Facebook properties are fetched from Facebook and stored in a User object. Next time the user logs in, this information should reappear in the Parse Cloud. This improves the overall performance and prevents unnecessary
requests to Facebook. This information could become stale if the user updates his Facebook information, so the app will query Facebook when it starts up and verify any updates in the information.

3.4. Activity Class

This class is meant to process the relationships between the other classes. In this application, there are three types of relationships possible between the classes: a “User” liking a “Photo” or ”Video”, a “User” commenting on a “Photo” or ”Video”, or “User” sharing a “Photo” or ”Video.” After reading about databases and relationships between different classes, it was decided to make this class to model all three of these relationships in a single joint table called “Activity”. When a user likes, comments, or shares, a new instance of that class is created to represent the relationship. This class contains “fromUser” of type “User” to represent the initiator of that action; for example user A likes a video. The “type” field of type “String” is used to represent the kind (type) of that action; is it liking, sharing, or commenting. There is also a fourth activity type called “join”. This activity is created when a new user is created to tell his or her Facebook friends who are already using this application.

4. Controllers and Front-end

The user interface classes are divided into three different components and an MVC pattern is used in the design. The “Controller” component contains a group of classes that are subclasses of the UIViewController class and responsible for linking between the application’s data and its visual appearance. The UIViewController class provides the infrastructure for managing the views of iOS apps [4]. The “View” component contains a group of classes that are subclasses of
the UIView class. The UIView class defines a rectangular area on the screen and the interfaces for managing the content in that area [4]. These classes consist of cells, footers and headers of UITableViews. The “Model” component consists of multiple classes that encapsulate specific data and define the logic and computation that manipulate and process that data. In addition, there are some support classes used by several components: “Contestants”, “Utilities”, and “Cache” classes. The “Cache” class is beneficial for improving the application performance. When the user likes or comments on a video or photo, while the Parse Cloud processes the request, the application manually updates a local cache as soon as the request is sent. This allows updates to the model changes without having to wait. This will give the user a better opportunity to see his comment or like once he finishes engaging in a post.

“Delegation” pattern is also used to keep the different objects coordinated. Delegation is a simple and powerful pattern which one object in a program acts on behalf of, or incoordination with another object. Whenever a user interacts with a post, likes it or comments on it, the view notifies the controller, the delegate, that the user has tapped the like or comment button to take the appropriate action.
RESULTS

Figure 5: Home tab

iReclaim now is a tab-bar application with three tabs, home tab, video and picture uploading tab, and a setting tab. The first tab, home tab as Figure 5 shows, presents all the videos and pictures uploaded by the company. Users can like, comment, and share these posts to their Facebook timeline.
The user logs in to the app via Facebook, as Figure 6 shows, and the application remembers the user the next time the user uses the application. Every time the company uploads videos and pictures, the users are notified.
The settings tab provides information about the company, as Figure 7 shows, and gives the user an opportunity to log out. The video and picture uploading tab, accessible by admins only, allows an admin to upload videos and pictures to the back-end server.

There is still some work to be done in the future. The “Gamification” feature was not implemented and that will be something to do in the future. Additional features might be implemented to enhance the ability to like other users’ comments and reply to their comments and enable users to delete their comments after they comment.
CONCLUSION

iReclaim is an intricately designed app specified to the needs of the company “Reclamation Studios.” It combines the unique qualities of YouTube such as streaming, sharing, and commenting on videos with the characteristics of Facebook that include sharing and engaging in post interactions. Since the world of technology is vastly emerging, iReclaim was created to expose the unacknowledged videos that companies desire to reveal. iReclaim positively allows a company to upload a video and picture to showcase its’ innovations to any audience. Further, iReclaim enables any user around the world to engage in posts. Having said that, any individual is able to contribute its’ own opinion by liking, sharing or commenting on a specific post. This is beneficial to a company by feedback and exposure. Likewise, an individual has the opportunity to interact in a companies activities. Overall, iReclaim is a simple way for companies to showcase their attributes via social media, and video and picture display to an intended audience rather than losing exposure amongst thousands of videos everyday.
REFERENCES


[5] Parse Documentation parse.com/docs

BIOGRAPHY

Yaman Shiekh Deia is a senior computer science major at the University of Evansville. He started his undergrad in Syria 2011 at the University of Aleppo and transferred to the University of Evansville in 2013. He likes developing software and intends to start a career upon graduation in software developing.