

# Software Engineering CSC648/848



## **Team 01 / Section 01**

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## **“Milestone 1”**

March 6, 2023

## Revision History Table

Revision ID	Revision Date	Revised By
1	03/03/2023	Team1

# Table of Contents

Executive Summary.....	4
Personas and User stories .....	6
Data Definitions .....	18
Initial list of functional requirements .....	21
List of non-functional requirements .....	24
Competitive analysis.....	25
High-level system requirements .....	28
Study Plan.....	29
Checklist.....	32

## **Executive Summary**

The proposed social media platform is called "PicturePerfect" and it aims to be a powerful visual storytelling and inspiration destination for users of all levels, from casual hobbyists to professional photographers, content creators and business owners. Our application is primarily a duplication of Imgur. But, Imgur cannot perform certain functions that Picture-Perfect can such as advanced editing features, image sorting, content filtration, comment control. Further, the platform combines the best features of Instagram and Pinterest, allowing users to share photos and videos in a visually appealing way, with the ability to organize content into customized boards.

Our application gives unique and engaging user experience, with features such as following and sharing other accounts, liking, and commenting, as well as saving and sharing posts. Users can also tag, comment each other and have control over comments facilitating easy communication and collaboration. The app includes a range of powerful tools and filters for editing and enhancing photos, allowing users to create professional-quality content with photo organization, the ability to add and filter sponsored content, and advanced image sorting capabilities, making it a

valuable tool for content creators and business owners looking to expand their reach and connect with their audience.

Our software development team is made up of 5 key developers. Everyone plays a key role in the creation of our app Picture Perfect. Vinay is our front-end lead. His expertise has led us to build a beautiful User Interface and experience. Ishika is our lead backend developer. She works tirelessly to make sure that our databases are up to date and properly working. Jacob has the luxury of being the lead of two positions. He is our github master as well as our scrum master. Then there is Nic, the product owner. Nic acts as a stakeholder and active user of our product. Providing user stories and interviews of users of Picture-Perfect. Last but certainly not least is Alekya. Alekya is the glue to our team. She ensures everyone is on top of their tasks and that we are on a proper timeline to get our product finished and ready to release to the public.

In summary, PicturePerfect is a visually stunning platform that offers advanced editing features and image sorting, allowing users to create professional-quality content. With a user-friendly interface and powerful collaboration tools, it is the perfect platform for content creators and businesses looking to expand their reach and connect with their audience. With our talented team of developers, we are confident that PicturePerfect will be a valuable asset to the social media landscape.

# Personas and User stories

## Personas:

### Persona ID 001:



Name: Kiran

Age: 23

Location: San Francisco

**Behaviors:** Kiran enjoys spending time on social media platforms, posting and sharing content with their friends and followers. He is very active on multiple social media platforms and is a high priority user.

**Interests:** Kiran is interested in sharing and consuming visual content, including images.

**Skills:** Kiran is proficient in using social media platforms and has a good eye for selecting visually appealing content.

**Pain Points:** Kiran finds it challenging to edit the image and add cool filters before uploading. It is time consuming to edit the image in a professional image editing software which is also confusing because he does not have that much knowledge in image editing.

**Needs:** Platform to discover, edit, and share content directly with others. He wants gain followers and influence over the audience.

**User Story:** As a social media enthusiast, he is looking for a platform to discover, edit, and share content with others. He will use the Picture-Perfect app to find images that are unique and eye-catching, and then edit and share them on other social media platforms also.

## Persona ID 002:



Name: Eddie

Age: 28

Location: Sunnyvale

**Behaviors:** Eddie is professional in the creative industry as a graphic designer, photographer, and artist. He is always looking for inspiration and new ideas to improve his work.

**Interests:** Eddie is interested in discovering high-quality visual content and using it as a source of inspiration for their own work.

**Skills:** Eddie has advanced skills in creating and editing visual content.

**Pain Points:** Eddie struggles to find high-quality content that meets his specific needs and requirements. He finds a lot of unrelated images and it is difficult for him



to look for images on a particular theme. It is time consuming to find relevant images from a lot of unorganized images.

**Needs:** A platform to find high-quality content that meets his specific needs and requirements easily with less effort. He usually finds a lot of unrelated images and wants to save his time and effort in finding images easily on a specific theme.

**User Story:** As a creative professional, Eddie will use the Picture-Perfect app to find high-quality visual content that he can use as inspiration for his work. He will browse the app to find images that match his aesthetic and style, and then save them to his collections for future reference.

### **Persona ID 003:**



Name: Samantha

Age: 24

Location: San Jose

**Interests:** Traveling, Business, entrepreneurship

**Behavior:** Samantha is a highly active user on social media. She is very particular about the aesthetic of her profile and spends a lot of time curating her feed to make sure it reflects her personal brand. She is also very engaged with her followers and other users, commenting and liking posts regularly.

**Pain points:** Samantha finds it frustrating that Instagram algorithm does not always show her posts to all her followers, which makes it harder to grow her audience. She

also struggles to find high-quality, original content on the platform, as many users repost the same images repeatedly.

**Needs:** Samantha needs a platform that is user-friendly and visually appealing. She also wants her content to reach as many people as possible and access analytics and insights to track her growth and engagement on the platform.

**Motivations:** Samantha is motivated by the opportunity to grow her personal brand and connect with other influencers and photographers in her niche. She is also excited about the prospect of discovering novel places and ideas through the content shared on the platform.

**User Story:** Samantha is looking for a platform where she can highlight her travel photography and connect with peers. She also wants to use the platform to grow her personal brand and attract more clients to her digital marketing business.

## Persona ID 004:



Name: Emiley

Age: 30

Location: Freemont

**Behaviors:** Emiley edits and curates' contents, looks for interesting stories and images to feature.

**Interests:** Journalism, media, storytelling

**Skills:** Advanced computer skills, experience in video and photo editing software.

**Needs:** Emiley needs a platform which has easy-to-use interface for curating and managing content, access to a variety of interesting and newsworthy images

**Pain Points:** Emiley finds Limited options for discovering new content, and it is difficulty for her in keeping up with user-generated content.

**Personality:** Inquisitive, curious

**User Story:** As a new editor, I want to be able to easily browse through a variety of interesting and newsworthy images, so that I can curate the best content for our audience.

I want to be able to efficiently manage and organize the content that I feature, so that I can deliver the best possible user experience.

## User Stories

User Stories S NO	Persona	Functionality needed	Uses of it	App Features
1.	Kiran	Platform to discover, edit, and share content directly with others.	Posting and sharing quality content with their friends and followers. He can increase his influence.	<p>Users can add text to their images by using text tools for captions, watermarks, and other purposes.</p> <p>Users can crop, resize, rotate, and can also add filters to the images</p>

2	Eddie	A platform to find high-quality content that meets his specific needs and requirements easily with less effort.	This can filter out unrelated images and saves his time and effort while finding the quality content based on his needs and requirements	<p>Users can organize their photos into albums to make it simpler to search for and share images related to any specific themes or occasions.</p> <p>Users can add meaningful hashtags to their images to make them easier to find</p>
3	Emiley	Emiley needs a platform which	She can curate the best	Users can search for images based

		has an easy-to-use interface for curating and managing content, access to a variety of interesting and newsworthy images.	content for our audience and will be able to efficiently manage and organize the content that she features.	on specific keywords or tags based on categories, topics, or hashtags.  Users can organize their photos into albums to make it simpler to search for and share images related to any specific themes or occasions.
4	Samantha	A platform that is user-friendly	This can give her the opportunity to	Daily or weekly showcases of



		and visually appealing. She also wants her content to reach as many people as possible for growth and engagement on the platform	grow her personal brand and photographers in her niche.	<p>new or less popular images that have been uploaded, so that both new users and less popular images have the same chance of being seen by other users.</p> <p>Users can add meaningful hashtags to their images to make them more reachable to others.</p>
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## Data Definitions

Collection Name	Definitions and Attributes	Usage
<b>General User</b>	<i>A general user has basic facilities like account creation, login, editing and deleting their own posts, making their posts, edit their images before creating a post, searching for a specific post etc. They also can delete any comment made on their own post, for example, in cases, where the original poster deems a comment as inappropriate.</i>	
	<b>Post</b>	A given user can make, delete and edit their own posts.
	<b>Comments</b>	A given user can comment on any post made public.
	<b>Likes</b>	A given user can like any post made public.
<b>Admin User</b>	<i>An admin has the privilege of deleting any given post, comment, banning and deleting any account and viewing monetary compensation details for any given post.</i>	
	<b>Post</b>	A given admin can delete/view any post.
	<b>Comments</b>	A given admin can delete/view any comment.
	<b>General User accounts</b>	A given admin can delete/view any General User account.

<b>Database Admin</b>	<i>A database admin has the privilege of viewing any database details as and when needed, ranging from MySQL tables to the photos posted.</i>	
	<b>MySQL tables</b>	A given Database Admin can view/edit the MySQL tables as and when deemed required.
<b>User Profile</b>	<i>A user profile is basically a short view of a given user's details, like, name, age, employment type, headline etc.</i>	
	<b>Basic details</b>	The basic details of a given user are specified in this component.
	<b>Posts</b>	The posts made by the given user are also displayed on their profile.
<b>Comments</b>	<i>A comment is a short piece written by a user to describe their opinions related to the post.</i>	
	<b>Delete</b>	Only the original poster and an admin user can delete a given comment.
	<b>Write</b>	Any given user can write a comment.
<b>Posts</b>	<i>A Post is a short description of a given image which is posted.</i>	
	<b>Comments</b>	Any given user can write a comment, but, only the original poster and an admin user can delete a given comment.
	<b>Like</b>	A Post maybe liked by any given user.
	<b>Dislike</b>	A Post maybe disliked by any given user.

	<b>Tags</b>	A post may have more than one tag(s), which are used to segregate posts. They could be defined based on the type of photo, location of a photo etc.
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## **Initial list of functional requirements**

- Create an account (register, login, and logout):
  - Users are required to create an account (need to first register, then login and logout)
  - We will just use basic information of the users such as username/email and password
- Share photographs/pictures:
  - Users can upload images from their devices or import them from other platforms.
  - Users can share their images and other users can repost the original pictures by tagging the original user who uploaded them.
- Commenting and liking:
  - Users can add comments on the photos, like them and can have discussion thread as well.
  - Users will have control over the comment section, and they can delete any comments they find offensive.

- Photo organization and tagging:
  - o Users can organize their photos into albums to make it simpler to search for and share images related to any specific themes or occasions.
  - o Users can add meaningful hashtags to their images to make them easier to find.
- Image Editing:
  - o Users can add text to their images by using text tools for captions, watermarks, and other purposes.
  - o Users can crop, resize, rotate, and can also add filters to the images
- Ads and sponsored content filtration:
  - o Users can be provided with no ads and sponsored content so that they can focus on the content without distractions.
  - o Users would get revenue based on the number of clicks and downloads of the images.
- Privacy policies:

- o Data about the users such as browsing activity, location information, and device information are not collected and users are given transparency into how their personal information is collected, stored, and used.
  - o Users can have the option of anonymous uploads without providing personal identifying information.
- Image sorting:
  - o Daily or weekly showcases of new or less popular images that have been uploaded, so that both new photographers and less popular images have the same chance of being seen by users.
  - o Images are shown based on when they were uploaded or posted instead of how many votes they got. This way, users have an equal chance of seeing newer images, no matter how popular they are.
- Search:
  - o Users can search for images based on specific keywords or tags based on categories, topics, or hashtags.

## List of non-functional requirements

- User interface (UI) design: Our application's user interface will be responsive, allowing users to use it on a phone or a laptop.
- User-friendly UI: The user interface (UI) will be straightforward and simple to use so that people can easily see and access everything.
- Security: Users' data will be protected. The password would be transferred to the database after being encrypted and after creating an account.
- Performance: Our application will operate swiftly in terms of response and loading times.
- The code will be maintained in the GitHub repository so that other team members, in addition to the developers, can utilize it and access it. Also, to make it simple to merge code without creating issues, feature branches and development branches are made inside the repository.
- The app will allow users to navigate between pages easily and quickly, and search for specific images.
- Our application will work with a variety of operating systems and different browser versions and types.



## Competitive analysis

Competitors Features	PicturePerfect Features
<p>Imgur:</p> <p>Pros:</p> <ul style="list-style-type: none"><li>• Imgur has a large user base.</li><li>• It is completely free and can upload as many images as possible</li></ul> <p>Cons:</p> <ul style="list-style-type: none"><li>• Too many Ads and data harvesting.</li><li>• No user post moderation, biased display preference.</li><li>• Limited Image editing options</li></ul>	<p>Our Features:</p> <ul style="list-style-type: none"><li>• Removing ads and sponsored posts which interrupt the viewer experience</li><li>• Adding no data harvesting which offers increased privacy</li><li>• Providing multiple images editing options</li><li>• Post management options for the users who upload</li></ul>
<p>Postimages:</p> <p>Pros:</p> <ul style="list-style-type: none"><li>• Postimages has large servers to store many millions of files</li><li>• Can set an expiration for a file when uploaded</li></ul>	<ul style="list-style-type: none"><li>• Users can organize their photos into albums to make it simpler to search for and share images</li></ul>

<p>Cons:</p> <ul style="list-style-type: none"> <li>• Ads</li> <li>• No photo organization and tagging features</li> <li>• No public upload displays</li> <li>• Minimal functionality</li> </ul>	<ul style="list-style-type: none"> <li>• Public upload display on PicturePerfect attracts users who want to share with the world</li> <li>• Expansive suite of functional features</li> </ul>
<p>Imgbox:</p> <p>Pros:</p> <ul style="list-style-type: none"> <li>• Imgbox has large servers to store many millions of files</li> <li>• Supports video uploads</li> <li>• Can set an expiration for a file when uploaded</li> </ul> <p>Cons:</p> <ul style="list-style-type: none"> <li>• Ads</li> <li>• There is no option for people to directly comment or like the images.</li> <li>• No public upload displays</li> <li>• Users can't repost the original pictures</li> </ul>	<ul style="list-style-type: none"> <li>• Users can add comments on the photos, like them and can have discussion thread as well.</li> <li>• Users will have control over the comment section, and they can delete any comments they find offensive or inappropriate.</li> <li>• Users can share their images and other users can repost the original pictures by tagging the original user</li> <li>• Can delete a post the user owns at any point</li> </ul>

The primary advantages of PicturePerfect are the improved privacy and lack of non-user advertising. Paired with increased user agency as far as image editing features and post moderation, the contributors have much more power in curating the environment in which their images are displayed without being muddled by intrusive advertisements or uncouth commentary. Many other image hosting sites only enable their users to share their uploads via a generated link, PicturePerfect will display contributions of the users publicly for anyone to browse and enjoy, further encouraging marketing and sales opportunities.

## **High-level system requirements**

1. Cloud server – AWS
2. Front-end technology – React
3. Web application framework – Django
4. Database and Version Number – MySQL 8.0
5. Operating System – Ubuntu 22.0
6. Web Server – Ngnix 1.20.1
7. Server-Side Language: Python 3.8

## Study Plan

1. Alekya – Team lead
2. Jacob – GitHub & Scrum master
3. Vinay – Front-end Lead
4. Ishika – Backend lead
5. Nic – Product Owner

- Alekya and Vinay will be instructing the group about the front-end elements such as React and Django. In one month, the group should understand how to route among pages as well as create/instantiate any page that might be needed. Writing and importing components in React to incorporate into the site as well as other basic operations.
- Jacob will be teaching the group about Git and how to manage branching and merging so that the group understands how to operate within the repository without confusion or complications.

- Ishika and Nic will cover the back-end elements like MySQL and the cloud server so that everyone can connect to the database and perform managerial tasks like making tables and populating them as needed.

Everyone will have some individual responsibilities as far as studying Python elements specific to our stack. Another aspect all group members will take responsibility for is how to interview potential users for issues they may have with other services to better inspire and inform potential features of our own application.

## Discrete Timeline

Date	Alekya & Vinay	Jacob	Ishika & Nic
03-08	Creating a React component	Basic Git command usage	Connecting to the DB via the cloud server
03-15	Routing amongst components via React	Proper branch management and etiquette	Using MySQL Workbench and basic SQL operations
03-22	Handling requests with Django	Resolving and preventing merge conflicts	Introductory SQL queries and commands
03-29	Displaying site data via Django	Cover rebasing	Top to bottom DB management

## Checklist

Task No.	Task Description	Status/Progress	Remarks
1	Team found a time slot to meet outside of the class	DONE	We found a time slot of 2:30PM-3:30PM every Wednesday for a scrum meeting.
2	Scrum Master shares meeting minutes with everyone after each meeting.	ON TRACK	We have a shared document wherein the scrum master regularly updates/adds the meeting minutes.
3	Github master chosen	DONE	We have chosen Jacob to be our Github master.
4	Everyone sets up their local development	DONE	Everyone has set up the codebase on their local device from where we all worked to complete M0.



	environment from the team's git repo.		
<b>5</b>	Team decided and agreed together on using the listed SW tools and deployment server	DONE	We have decided and agreed to use our software stack, deployment server etc. and have already started working with it.
<b>6</b>	Team ready and able to use the chosen back/front-end frameworks.	ON TRACK	Every one of us is learning to use the chosen frameworks and helping each other with the same. We have a fixed study plan for it too. The study plan has been listed under section 8.
<b>7</b>	Team lead ensured that all team members read the final M1	DONE	As we submit this document, the team lead has ensured that everyone has gone through the document and have no doubts

	and agree/understan d it before submission		and any requested changes have been made accordingly.
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