

Assignment 1

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1) Keeping the class exercise in mind, do the following:

Take any product, system, or service you use daily, like iPhone, Fitbit, MBTA, Amazon, Google, Reddit, News Website, etc. Explain what user experience aspects of that product you liked! Then, list what significant improvements you would suggest!

Answer: The product that I utilize every day is Instagram. It is an extremely stellar photo sharing application that has a host of extensive and complex features but can improve in some features that can amplify the user experience.

a) The user experience that I liked about Instagram has been outlined below:

1. The login experience is seamless, even if the user logs in after a long time. Users can log in through various methods such as username, phone number, email, or Facebook account. Account recovery is also very easy through the application.
2. Instagram contains a sea of content, but the user interface makes it easy to digest the various features of the application. You can scroll through posts, reels, stories, lives, and videos without feeling overwhelmed, because of the content in the form of images.
3. There are different options for privacy – public and private profiles, 'Close Friends' for Instagram stories, and an option to 'Hide' stories and live videos from certain users.
4. The content viewed on the application can be shared by the user within the application and beyond it as well. There is a quick share option that helps the user share content with their closest followers. Based on the system (mobile, laptop, tablet) the content can be shared with users on other platforms such as Whatsapp, AirDrop (for iPhone users), Email as well.
5. Instagram has a host of options available to help content creators and businesses market their brand effectively. Options such as posts, stories, reels as targeted ads which can help the creator or business improve engagement and build a legion of followers have helped create a huge impact on consumers. It has put many small businesses on the map.
6. Instagram also has 'Archive' and 'Save' options which help the user save content that they have seen for later viewing.
7. Instagram has an impressive recommendation system that suggests content on the 'For You' page on Instagram. Users can also select 'Interested' and 'Not Interested' to new content which can help in recommending future content to the user.
8. Instagram also has an option in their Settings where the user can take a break from doom scrolling by setting reminders. This feature coupled with the Activity feature helps the user keep track of the time spent on the app.
9. The concept of obtaining old posts and profile data based on hot and cold data received from the cloud has also been an interesting find. Within just a short delay, tons of old posts are requested but only when the user scrolls to the bottom of any profile, including their own. This space saving and cost reducing method of alternating between hot and cold data is a good approach.
10. Instagram has an integrated payments system that helps the user seamlessly purchase products or subscribe the content creators without leaving the application.

b) The significant improvements that I would suggest have been outlined below:

1. Although Instagram has the 'Saved Posts' option where the user can later find their saved content, there is no way to search within it, even when they are organized as collections. I would suggest a search feature based on hashtags that can help the user search for their saved content.

2. Although advertisements are beneficial on Instagram, sometimes the user may only see advertisements instead of actual content or updates, which can become frustrating for the user. I would suggest ad counters or timers that can help keep track of the ads on the app and make it less frustrating for the user.
3. Multiple images can be added in a single post, but they can only be oriented in either the Landscape or the Portrait mode. I would suggest enabling mixed orientations for each photo in the post, which can improve the user sharing experience.
4. The 'Close Friends' option is only available for the story feature in Instagram but not in posts, which makes the post visible to all followers of the user. The user has to create multiple accounts to filter out their content as per the follower list. I would suggest adding a Post Privacy option in the profile that can help the user turn some of their posts private or shared with 'Close Friends', which makes it easier to handle a profile even if it is public.
5. Even with a great recommendation system, viewing shared content from other users affects the recommendations of one user. Over a period of time, the recommendations accumulate and the content visible to the user might not be acceptable to the user which makes the experience frustrating. I would suggest an algorithm refresh option which works as a soft delete and only removes recommendation data. This way the user does not have to clear cache or data which might remove saved content and user details from the system.
6. Having subscriptions to various creators accumulates costs for the user and might discourage subscriptions. Providing flexible subscriptions along with a one-time Instagram subscription can help the user save cost and follow their favorite creators. This can also make it easier for the user to track subscriptions.
7. Instagram has limited accessibility options. I would suggest adding more options like Text-to-Speech and voice commands in the app can help it become more accessible.

2) Create the use cases for the interactions, assuming the site's improvements in mind. Create 5-8 use cases(Include at least 2 heavy weight use cases and middle weight use cases).

Be creative, rethinking or recreating that product, system, and service.

Answer)

Use Case 1

Middle weight use case – User has a search bar within the 'Saved Posts' feature of Instagram where they can search for saved videos and posts using hashtags

Actor	Instagram User
Use Case Overview	User should be able to search within their Saved Posts and Collections on Instagram
Basic Flow	<ol style="list-style-type: none"> 1. The Instagram user logs in to their account 2. They scroll through a post, reel, or video that they plan to save for later 3. They tap the 'Save' button which looks like a bookmark at the bottom right of every post 4. The post gets saved into 'Saved Posts' or can be added to 'Collections' in an organized manner 5. The user can create a new collection or save the post to an existing collection

Alternative Flow B	The user can use a search bar to search for a particular post by the hashtags associated with the post.
Alternative Flow C	The user can search for a collection of related posts based on the hashtag associated with it
Alternative Flow D	The user can search for Collections and search within Collections for posts
Alternative Flow E	The user clicks on the cross icon to cancel their search and navigates out of the 'Saved Posts' option in Instagram

Post Conditions : The user can search for old posts which have been saved with ease

Use Case 2

Heavyweight use case - User is subjected to advertisements based on a time limit or an ad counter to avoid too many ad posts

Actor	Instagram User
Use case overview	User is subjected to advertisements based on a time limit or an ad counter to avoid too many ad posts
Subject Area	Social Media
Trigger	User scrolling/viewing of Instagram posts
Precondition 1	User must be logged in to their account using their device (mobile, laptop, tablet)
Precondition 2	User must have scrolled through a set number of posts, reels, or stories on the application
Basic Flow	<ol style="list-style-type: none"> 1. User visits the Instagram application 2. They start scrolling content on the 'For You', 'Home', 'Reels', or 'Stories' features of Instagram 3. They have scrolled through a number of posts or watched a certain amount of reels before targeted ads start popping up 4. User makes decisions to visit pages/buy products based on these ads
Alternate Flow B (Temporary ad-free scrolling)	<ol style="list-style-type: none"> 1. An ad counter is set in the background when the user logs in 2. A popup shows on the app that says 'Watch these ads for 30 seconds for 30 minutes of uninterrupted scrolling' 3. The user clicks on 'OK, take me there!' and the app navigates to ads where the user can view the targeted ads 4. They get 30 minutes of uninterrupted content
Alternate Flow C (Ad counter)	<ol style="list-style-type: none"> 1. The user clicks 'No thanks' on the popup instead and just views content along with ads. A post counter is initialized in the background that counts the number of posts/reels/videos/stories by the user

	<ol style="list-style-type: none"> 2. A post sum calculates the sum of these posts 3. An ad counter in the background counts the number of ads viewed by the user without clicking on associated links across all features of the app 4. An ad sum calculates the sum of ads 5. If the ads per post exceed a set limit the ads are stopped. The post and ads counters are reset 6. The cycle starts again
Alternate Flow D (Ad timer)	<ol style="list-style-type: none"> 1. A timer records the time spent on ads across all features of the app 2. If the timer exceeds a set limit, the ads are stopped. The timer is reset 3. The cycle starts again
Termination outcome	The user navigates out of the application

Post Conditions : User has a pleasant experience while scrolling on the application/can get important updates about current events quickly

Business rules

1. Ad counter resets only when limit has been reached
2. Ad counter/timer works across the various features of the application
3. Cycle should continue seamlessly for the user

Use case 3

Heavy Weight Use Case – User should be able to upload mixed orientation images in a single post which contains multiple photos

Actor	Instagram User
Use Case Overview	User should be able to upload multiple images in portrait or landscape mode in a single post
Subject Area	Social Media
Trigger	User creates a new post
Precondition 1	User must be logged in to their account using their device (mobile, laptop, tablet)
Precondition 2	User should have access to the photos they want to post/allow access to Instagram to use the photos
Precondition 3	User has navigated to the 'Create Post' feature of Instagram
Basic Flow	<ol style="list-style-type: none"> 1. The user selects the photos to be uploaded in the post from their local device 2. Instagram provides in app options to select photos and edit them as per requirements 3. User then adds captions, hashtags, location, music, and other in app options for the post 4. User clicks on 'Post' to upload the post

	5. The uploaded images become visible to the user and the user's followers on the user's feed
Alternate Flow B (Cancelling post creation)	The user selects the 'Cancel' option in the Instagram UI which redirects the user to the 'Home' page. No images are uploaded and no post is created
Alternate Flow C (Uploading only one orientation of photos – current Instagram scenario)	<ol style="list-style-type: none"> 1. User selects the 'Multiple' option to upload multiple photos 2. User selects 'Landscape' or 'Portrait' mode for the images selected from their device 3. The same orientation is applied to all the photos in the post 4. The user selects the 'Share' option 5. All photos in the view mode of the post are in the same orientation when swiped through
Alternate Flow D (Uploading mixed orientations)	<ol style="list-style-type: none"> 1. User selects the 'Multiple' option to upload multiple photos 2. User selects a mixed orientation of photos, i.e. both 'Landscape' and 'Portrait' modes for each photo 3. Instagram applies adjustments to the layout for each image according to selected modes 4. The user selects the 'Share' option 5. All photos in the view mode retain the original orientation when swiped through
Alternate Flow E (Editing orientation in Edit Mode)	<ol style="list-style-type: none"> 1. The user navigates to a post and selects the 'Edit' option for the post 2. They can adjust the orientation of images in the post in 'Edit' mode 3. The user selects the 'Share' option 4. All photos in the view mode retain the original orientation when swiped through
Termination Outcome	The user navigates to other features within the app upon successful upload/user navigates out of the application

Post Conditions : The user's followers can view the post shared by the user in mixed orientations. The user can increase engagement with their followers through likes, comments, and shares on the post.

Business rules

1. Mixed orientations should be available only in the 'Create/New Post' or 'Edit Post' section of the application
2. Layout should adjust according to orientation when viewing the post

Use Case 4

Heavy Weight Use Case – User should be able to make some posts private (Close Friends) on their profile, even if the profile is public

Actor	Instagram User
Use Case Overview	The user should be able to mark some posts with a 'Close Friends' only mark, so that some posts are private even if the user's account has been marked public
Subject Area	Social Media
Trigger	User navigates to the settings in their profile and selects 'Accounts & Privacy'
Precondition 1	User must be logged in to their account using their device (mobile, laptop, tablet)
Precondition 2	User must have navigated to the 'Profile' section of the app where they can view their profile
Basic Flow	<ol style="list-style-type: none"> 1. User logs in to their Instagram account 2. They navigate to their 'Profile' page on the app 3. They can navigate to the Settings for their profile and find the 'Close Friends' settings 4. There, the user can add or remove the required followers 5. They also go to the 'Accounts & Privacy' option and change their profile from private to public 6. They can post an Instagram story which can be shared only with the 'Close Friends' list 7. This story is visible only to accounts present in the 'Close Friends' list even after the account is made public
Alternate Flow B	<ol style="list-style-type: none"> 1. The user has a public profile and navigates to the 'Create Post' option 2. The user selects the images/videos they want to post 3. They may add the tags, music, location, and captions for the post 4. A 'Close Friends' option is visible when the user wants to share the post 5. The post is only shared with the followers present in the 'Close Friends' list
Alternate Flow C	<ol style="list-style-type: none"> 1. The user has a public profile and navigates to their profile 2. They can view their posts and reels 3. The user clicks on the 'Select Post Privacy' button to select posts 4. They can select multiple posts from their profile

	<ol style="list-style-type: none"> The user is prompted with the message 'Do you want to make these posts 'Close Friends' only?' The user selects 'Yes, I do' and the post becomes hidden from followers that are not on the 'Close Friends' list and are only available to followers that are selected by the user
Termination Outcome	The user navigates to other features within the app upon selecting the Privacy settings/user navigates out of the application

Post Conditions : Users with many followers and a public profile can maintain a special list with close friends and family who can view private moments posted on their feed instead of only sharing it for 24 hours on their story

Business Rules

- This functionality should only be available for the posts section of the application
- User profile can be public or private, but the 'Close Friends' for posts should be persistent

Use Case 5

Easy Use Case – Algorithm refresh when the user selects the option to reset their content recommendations.

Actor	Instagram User
Use case overview	The user should be able to go to their Account settings and refresh their algorithm to reset their content recommendations on the 'For You' page
Precondition 1	User should be logged in to their Instagram account via their device (mobile, laptop, tablet)
Precondition 2	User should have navigated to the profile section and the account settings
Basic Flow	<ol style="list-style-type: none"> The user scrolls through the Account settings or searches for the 'Refresh Algorithm' option The user clicks on it Instagram performs a 'soft reset', which only clears collected user data to power recommendations based on interest and not the complete user data or login data The user can scroll content based on their interests again

Post Conditions : The user can enjoy new content recommendations after clearing old collected user data

Use case 6

Middle weight use case – There is a subscription service for the entire app instead of individual accounts

Actor	Instagram User
Use case Overview	The user can opt for a subscription for Instagram that comes with 10 creator account subscriptions
Precondition 1	User must be logged in to their account using their device (mobile, laptop, tablet)
Precondition 3	User has navigated to Instagram settings
Basic Flow	<ol style="list-style-type: none"> 1. User logs into their account 2. User navigates to Instagram settings 3. In the Orders & Payments option, they select 'Subscriptions' 4. The user views the subscription details which outlines monthly or annual plans and gives access to 10 creator accounts and an ad-free experience 5. The user decides to purchase a subscription 6. Instagram prompts the user to the payment page and asks for a confirmation 7. User provides a confirmation, and the subscription is activated 8. User gains access to the accounts and enjoys the benefits of the subscription
Alternate Flow B (Subscription Cancellation)	<ol style="list-style-type: none"> 1. User navigates to Instagram settings to cancel their subscription 2. In the Orders & Payments option, they select 'Subscriptions' 3. The user views their active subscriptions and selects the option to cancel it 4. A prompt arises asking the user for confirmation 5. The user provides the confirmation 6. The user's subscription benefits are revoked and the user reverts to the free Instagram experience with ads
Alternate Flow C (Subscription Renewal)	<ol style="list-style-type: none"> 1. If the user's subscription is to be renewed automatically, then Instagram processes and renews the subscription automatically when it expires 2. Instagram sends the user a notification regarding the renewal 3. User can disable the auto-renewal via settings in Subscriptions 4. If the user fails to disable the auto-renewal, the system automatically processes a renewal
Alternate Flow D (Subscribing to more creator accounts)	<ol style="list-style-type: none"> 1. The user explores the platform and discovers more creators that they want to subscribe to in addition to the default 10

	<ol style="list-style-type: none"> 2. They navigate to the creator's account and click on 'Join' or 'Subscribe' 3. The user is taken to the Orders & Payments page where the user is prompted to pay for the subscription 4. Instagram updates the current subscription of the user to include the new subscription 5. Instagram offers more discounts on subscriptions based on a user prompt
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Post Conditions : The user can subscribe to 10 chosen creator accounts in one subscription

Use Case 7

Easy Use case – Additional options to make Instagram more accessible

Actor	Instagram User
Use case overview	The user should have Text-To-Speech and voice commands enabled for better accessibility
Precondition 1	User should be logged in to their Instagram account via their device (mobile, laptop, tablet)
Precondition 2	User should have navigated to their account settings
Basic Flow	<ol style="list-style-type: none"> 1. The user scrolls through their account settings 2. The Text-To-Speech and Voice command options are enabled 3. The user can now scroll confidently through the content and actions in the app independently

Post Conditions : The user can interact with the application more and use different features with added accessibility.