UCS 1728 : User Experience Design

CAT 1 - Answer key

PART - A

1. Name the components of UX design.

Usability: Productivity, efficiency, ease of use, learnability
Usefulness: Ability to use a system or product to accomplish goals of work
Emotional impact: Affective component of user experience and user feelings, user satisfaction
Meaningfulness: Long-term personal relationship with products

2. What kind of interaction can be a success factor for UX design?

Localized interaction: Localized interaction is localized with respect to both time and system. It's task-oriented, bounded, and limited, and it occurs in a very short time.
Activity-based interaction: Interaction with one device to do a set of related tasks.
Interaction across devices in the user's ecology.
System-spanning interaction: An activity-based interaction, often involving multiple parties in multiple work/play roles, multiple devices, and multiple locations.

3. How model-driven inquiry can streamline the UX design?

Model-driven inquiry builds models as the basis for limited, sharply focused data gathering.
(1) Build exploratory models
(2) Compile emerging questions or issues
(3) Select expeditious means for resolution
(4) Conduct limited, highly focused inquiry
(5) Refine and complete the initial models
(6) Review and validate the models

4. List out the features of contextual inquiry.

Contextual data can provide much-needed insight into customer behaviour patterns, helping you improve their experience.
The purpose of a contextual inquiry: Observing, Documenting, Inquiring
Understanding Other People's Work Practice : You collect data about the work domain and user's work activities, understand something about what the users do

Concept of work practice : “Work practice” is how people do their work. Work practice includes all activities, procedures, traditions, customs, and protocols associated with doing the work, usually as a result of the organizational goals, user skills, knowledge, and social interaction on the job.
Observing and Interviewing in Situation: What They Say vs. What They Do: observation as an exclusive data-gathering technique.

5. Define a flow model.

Simple graphical representation of how information and artifacts flow through the system as it is used. It’s essential to identify the basic system flow as early in usage research as possible. A flow model gives an overview of how information, artifacts, and work products flow among user work roles and parts of the product or system as the result of user actions.

6. Give a few examples of UX requirements.
1. In LMS, provide a submit button in an assignment page to submit it.
2. In online shopping, user can store the wish list to view and buy products in the future.
3. In online ticketing system, in case of timeout the user will be automatically logout of the session.
4. In the music app, the user can create a playlist, and shuffle the songs to hear.

PART B

7. How is Candy Crush Saga game so successful and popular? Identify the reasons with suitable examples.

Addictive Gameplay: The match-3 puzzle mechanic is easy to learn but challenging to master, keeping players engaged and coming back for more.
Social Integration: The ability to connect with friends on Facebook, compete on leaderboards, and send/receive lives creates a sense of community and competition.
In-Game Rewards: Daily rewards, special events, and limited-time challenges incentivize players to play regularly and achieve goals.
Power-Ups and Boosters: The availability of power-ups and boosters provides players with tools to overcome difficult levels and adds an element of strategy to the game.
Regular Content Updates: Frequent updates with new levels and challenges keep the game fresh and encourage continued play.
Accessibility and Cross-Platform Play: Candy Crush Saga is accessible on various platforms, including mobile devices and web browsers, making it easy for players to enjoy the game on their preferred device.

Engaging Visuals and Audio: The game's colorful and visually appealing design, coupled with catchy music and satisfying sound effects, enhances the overall gaming experience and draws players in.
Limited Lives Mechanic: The lives system, which gradually replenishes over time, encourages players to return to the game regularly or make in-app purchases to continue playing immediately, driving engagement and revenue.

8. Discuss the steps involved in the user work role model.

A user work role model is a simple representation of user work roles, sub-roles, and associated user class characteristics. It is essential to identify the operational user work (or play) roles as early in usage research as possible.

A user work role is a work assignment defined by the duties, functions, and work activities of a person with a certain job title or job responsibility.

A work role can:

- Involve system usage or not.
- Be internal or external to the organization, as long as the job entails participation in the work practice of the organization.

Subroles: For some work roles, sub-roles are defined by different subsets of tasks the work role does.

Mediated Work Roles: Some users serve roles that do not use the system directly but still play a major part in the workflow and usage context.

User Class Definitions: A user class for a work role or sub-role is defined by a description of relevant characteristics of the potential user community that can perform that role. Every work role and sub role will have at least one user class.

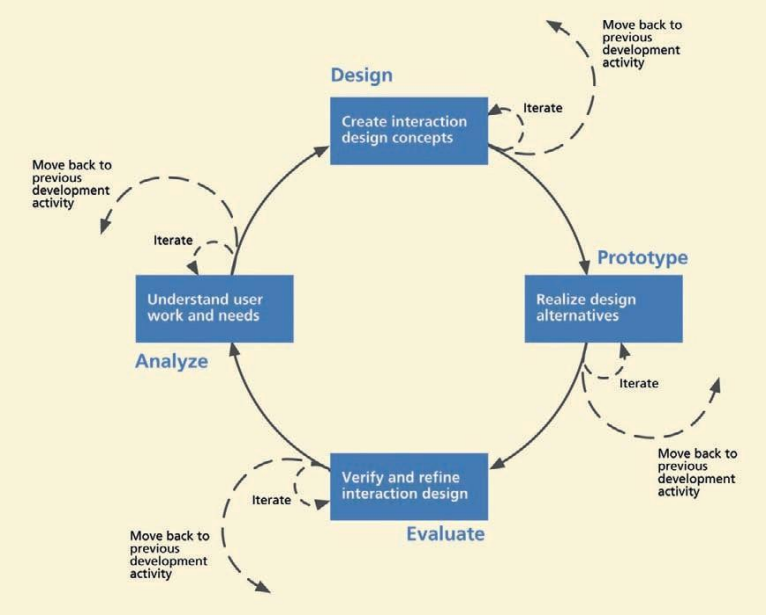
9. Prepare the UX requirements for the following case study.
A technology company is designing a new smartphone model with an option to download an email file by connecting a Bluetooth device to the smartphone.

Bluetooth Pairing: Ensure a seamless and secure Bluetooth pairing process for connecting external devices.
Intuitive UI: Create an intuitive user interface for downloading email attachments via Bluetooth.
Efficient File Management: Provide an organized system for users to access and manage downloaded email files.
Error Handling: Offer clear error messages and feedback for Bluetooth connectivity and file transfer issues.

Security Measures: Implement encryption and user consent mechanisms to safeguard email data during transfers.
Privacy Protection: Prioritize user privacy by maintaining data confidentiality during Bluetooth file transfers.

PART - C

10. Illustrate the UX Design process life cycle. How do you improve the quality of UX design? Explain.



Analyze: Understanding the business domain, user work, and user needs
Sub activity 1 : contextual inquiry - The purpose of a contextual inquiry: Observing, Documenting, and Inquiring
Sub activity 2 : contextual analysis - Identify work roles, Build initial flow model, Synthesize work activity notes, Build work activity affinity diagram from work activity notes, Communicate results to team via walkthroughs
Sub activity 3 : Extracting requirements- interaction design requirements , inputs driving the design process and helping to determine its features and the look, feel, and behavior of the interaction design. These requirements are used as a checklist to ensure that they are covered in the design, even before any UX evaluation.
Sub activity 4 : Synthesizing design-informing models - these include models describing how work gets done, how different roles in the work domain interact, the artifacts that are created, and so on.

Design: Creating conceptual design, interaction behavior, and look and feel.

Sub-activity-1: (i) design ideation :- Design ideation leads to the representation of mental models, conceptual design, and design storyboards.
(ii) sketching - The team does creative design thinking, brainstorming, and sketching of new design ideas. During the exploration of large numbers of design candidates, it can include physical mockups of product design ideas.
Sub-activity-2 : Design production -Involving the details of applying requirements, design-informing models, and envisioned design-informing models to drive and inform the emerging interaction design. Design production entails prototyping and iteration of the conceptual design, intermediate designs, and detailed designs.

Prototype: Realizing design alternatives. Prototype building is often done in parallel with and in conjunction with, design. As designs evolve in designers' minds, they produce various kinds of prototypes as external design representations. Because prototypes are made for many different purposes, there are many kinds of prototypes, including horizontal, vertical, T, and local.
Prototypes are made at many different levels of fidelity, including low fidelity (especially paper prototypes), medium fidelity, high fidelity (programmed functional prototypes), and "visual comps" for the pixel-perfect look and feel.

Evaluation: UX evaluation to refine an interaction design. For evaluation to refine, you can employ rapid evaluation methods or fully rigorous methods. This evaluation is where we see if we achieved the UX targets and metrics to ensure that the design "meets usability and business goals".

Improve the quality of UX design :

Improving the quality of UX (User Experience) design is crucial for creating user-friendly and effective products. Here are some key strategies to enhance the quality of UX design:

1. User-Centered Design: Focus on understanding your target users' needs, goals, and pain points. Conduct user research, surveys, and usability testing to gather valuable insights.

2. Clear and Intuitive Navigation: Ensure that the navigation within your product is straightforward and intuitive, making it easy for users to find what they need.

3. Consistency: Maintain consistency in visual elements, such as colors, fonts, and design patterns. Consistency helps create a sense of familiarity and predictability for users.

4. Minimalism: Strive for simplicity in design. Eliminate clutter and unnecessary elements to reduce cognitive load and make the user interface cleaner.

5. Mobile Responsiveness: In the era of mobile devices, it's essential to ensure that your design is responsive and functions well on different screen sizes and resolutions.

6. Accessibility: Make your product accessible to all users, including those with disabilities. Follow accessibility guidelines, such as WCAG, to provide an inclusive experience.

7. Fast Loading Speed: Optimize loading times to keep users engaged. Slow-loading websites or apps can frustrate users and lead to higher bounce rates.

8. Feedback and Error Handling: Provide clear feedback when users interact with the interface. Error messages should be helpful and guide users on how to correct issues.

11. Explain which kind of data is better for deriving UX experience: qualitative or quantitative?

The choice between qualitative and quantitative data for deriving a UX (User Experience) understanding depends on the specific research goals and the nature of the insights you seek. Both types of data have their merits and are often used in combination to provide a comprehensive picture of the user experience. Here's a breakdown of when each type is more suitable:

Quantitative Data:

- When to Use: Quantitative data is valuable when you want to measure and quantify specific aspects of the user experience, such as task completion times, click-through rates, error rates, or user preferences.
- Benefits: It provides statistical significance, making it suitable for making data-driven decisions and identifying trends and patterns.
- Examples: A/B testing to compare the performance of two design variations, analyzing user survey responses using Likert scales, or tracking user behavior through analytics tools.

Qualitative Data:

- When to Use: Qualitative data is valuable when you want to gain a deeper understanding of user behavior, motivations, emotions, and the context in which they interact with your product.
- Benefits: It offers insights into the "why" behind user actions, allowing you to uncover issues that quantitative data might not reveal.
- Examples: User interviews, usability testing with think-aloud protocols, ethnographic studies, or open-ended survey questions.

In Practice:

Combination: Many UX research projects benefit from a combination of both types of data. Quantitative data can identify problems and trends, while qualitative data can help explain why those issues exist and provide insights for improvement.

Iterative Process: UX research is often an iterative process. Quantitative data can guide initial design decisions, and qualitative data can be used to refine and validate those decisions.

Ultimately, the choice between quantitative and qualitative data should be driven by your research objectives. A well-rounded UX research strategy often involves collecting and analyzing both types of data to gain a comprehensive understanding of the user experience, uncover pain points, and inform design improvements.

12. Prepare the work activity notes for the given case study.
A platform that aims to help creators grow their communities by recognizing and rewarding their base of supporters. It tackles a curious problem that 99% of fans who contribute in non-monetary ways don't get the same content, access, and recognition they deserve. This means the creators need a way to identify their fans across all social platforms to grow their business and give recognition.

Work Activity Notes

Identify Work Role Model:

1. Build a user workflow model.
2. Synthesize work activity notes.
3. Build a work activity affinity diagram from the work activity notes.
4. Communicate results to others via a walkthrough.

Work Activity Notes:Tag ID: 1716

- These notes help collect all activity details from users to identify system issues.
- Always tag activity notes with a unique ID.
- Include the user's work role in the activity notes.

Raw Comment (Tag ID: 1716):

- Creators need a way to identify their fans across all social platforms.
- Fans who contribute in non-monetary ways lack recognition and access to the same content.

Breakdown of the Raw Comment (Tag ID: 1716):

- Creators need a solution for identifying their fans on various social platforms.
- Fans who contribute in non-monetary ways face issues with recognition and accessing content.

Analysis:

- The raw comment highlights two key problems in the system:

1. Creators' ability to identify their fans across social platforms.
2. Recognition and access issues for fans who contribute non-monetarily.

13. Identify the steps to gather UX requirements and validate it, so that it will help you find out what you need before jumping to design.

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- UX requirements means interaction design requirements. What is required to support user work activity needs.
- Work activity notes are not requirements.
- Requirements bridge contextual inquiry and analysis to design.
- Walk the WAAD one note at a time to deduce needs and UX requirements.
- Filter terminology to achieve consistency(eg.alarm, alert)
- Translate each user needs into one or more interactive design requirements.
- Switch from inductive to deductive reasoning
- Consolidate notes to condense ideas
- Extrapolate notes to broaden
- Remember that requirements are interaction design requirements
- Do a walkthrough of your work activity affinity diagram
- Extract interaction design requirements by deducing the requirements implied.
- Write the requirements statements using the generic structure.
- Document relevant quantified usability requirements for learnability, memorability, efficiency, understandability, and satisfaction.
- Generic structure of requirement statement
    - Major feature or category name
    - Second-level feature or category name
    - UX requirement statement[WAAD source node ID]
    - Rationale (if useful):rationale statement
    - Commentary about this requirement
- Validation
    - Coordinating Requirements, Terminology, and Consistency
    - Take User Stories and Requirements Back to Customers and Users for Validation
    - Resolve Organizational, Social, and Personal Issues Arising Out of Work Practice Changes