12. Peer-to-Peer Gifting Platform

Create a peer-to-peer/crowdsourcing gifting platform that simplifies the gifting process for various events such as weddings, birthdays, and other celebrations. The platform will allow event organizers or celebrants to create wishlists for gifts they desire. Guests can then contribute towards these gifts by pooling money together or choosing to leave cash gifts through the application. The platform will facilitate the purchase of gifts directly from the wishlist, which can include items from popular online retailers like Amazon, eMag, Altex, etc. To ensure a seamless gifting experience, the platform will display which items have been purchased to prevent duplicate gifts and will offer an option for guests to contribute cash towards items on the list or as a direct cash gift using their credit card.

Features:

- Wishlist Creation: Event organizers can easily create and manage wishlists, adding items from a catalog of products sourced from various online retailers.
- Gift Pooling: Guests can pool money together to fund more expensive gifts on the wishlist, making it easier to contribute towards something special.
- Cash Gifts: An option for guests to leave cash gifts through a secure payment gateway, providing flexibility in how they wish to contribute.
- Party photo/video gallery: Guests can upload images taken at the event to share with the other participants.
- Duplicate Prevention: The platform will track purchased items in real-time, updating the wishlist to prevent duplicate gifts.
- Payment Integration: Utilize Stripe Connect to manage transactions, ensuring a secure and efficient payment process for both collecting contributions and disbursing funds to the celebrant or for the purchase of gifts.
- Monetization (PoC level): Leverage affiliate programs such as ProfitShare and Amazon's Affiliate Program to earn commissions on purchases made through the platform. Additionally, a commission model can be implemented on transactions processed through Stripe Connect to generate revenue.

Technical Components:

- Affiliate Integration: Integrate with affiliate programs to pull product information and links, allowing users to add items to their wishlists directly from supported online stores.
- Payment Processing: Implement Stripe Connect for handling payments, including charging guests and disbursing funds to the event organizer or directly to vendors for gift purchases.
- Product Information Schema: Use Schema.org standards to pull and display product information, ensuring consistency and accuracy in product listings.

Challenges and Considerations:

- Security and Privacy: Ensure that all financial transactions are secure and that users' personal and payment information is protected.

- User Experience: Design an intuitive and user-friendly interface that simplifies the process of creating wishlists, contributing to gifts, and managing contributions.
- Payment Disbursement: Develop a reliable system for disbursing funds, whether for purchasing gifts directly from vendors or transferring cash gifts to the celebrant.
- Legal and Financial Compliance: Navigate legal and financial regulations related to online transactions, crowdfunding, and handling of personal data.

Goal:
This platform aims to revolutionize the way we think about gifting for special occasions by making it more collaborative, efficient, and meaningful. By simplifying the process of pooling resources for gifts, it encourages more thoughtful and significant contributions, enhancing the overall experience for both the gift-givers and recipients.

Problema [punctaj 20 puncte]
1) Pe o temă pe care o primiți la laborator, realizaţi Fișa Cerințelor pe modelul prezentat la curs (doar descriere, actori și scenarii de utilizare (doar descrierea, fără detalii)). În stabilirea punctajului se va ține cont de complexitatea Fișei Cerințelor, de identificarea corecta a posibililor actori și de modul în care sunt descrise Scenariile de Utilizare. (0..4 puncte)
2) Pentru Fișa Cerințelor creată la 1) de mai sus realizați diagramele Use Case. În stabilirea punctajului se va ţine cont de identificarea corectă a actorilor şi a use case-urilor şi de stabilirea corectă a relaţiilor dintre ele. (0..6 puncte)
3) Pentru Fișa Cerințelor creata la 1) de mai sus realizați diagramele de clase (clase + atribute + metode+ relații între clase). În stabilirea punctajului se va ţine cont de identificarea corectă a claselor şi de stabilirea relaţiilor dintre ele. (0..6 puncte)
4) O persoană din cele 4 va şti ce au făcut toţi membrii echipei şi va face prezentarea pe scurt a componentelor realizate de aceştia. De asemenea această persoană va stabili şi va negocia punctajul pe care-l merită echipa (0..4 puncte)
Bonus de maxim 4 puncte pentru cei care surprind cat mai multe aspecte (relații de tip include, extinde la diagrame use case, relații de agregare, compoziţie la diagramele de clasă).
Bonus de maxim 4 puncte pentru cei ce folosesc unelte bazate pe inteligență artificială pentru 1) și 2), dar vor preciza ce unealtă au folosit, ce prompt, ce avantaje/dezavantaje au avut folosind această unealtă.

Linkuri utile:
Class Diagrams: https://creately.com/, https://www.smartdraw.com/

AI tools for use case diagrams: DiagramGPT https://www.eraser.io/diagramgpt
Lucid https://lucid.app/

System Requirements: Peer-to-Peer Gifting Platform

1. Problem Description

Traditional gifting for special occasions (weddings, birthdays, etc.) involves significant logistical challenges:

- Coordination difficulties among multiple contributors
- Duplicate gift purchases
- Inefficient management of monetary contributions
- Lack of personalization in cash gifting
- Fragmented communication of preferences

The Peer-to-Peer Gifting Platform addresses these issues by providing a centralized digital solution where:

- Celebrants can create detailed wishlists
- Guests can contribute financially or purchase gifts directly
- Transactions are processed securely
- Contributions are tracked in real-time
- Duplicate purchases are prevented
- Revenue is generated through affiliate program integration

2. Actors

Primary Actors:

- **Event Organizer/Celebrant** – Creates and manages wishlists, receives gifts or cash contributions, tracks donations
- **Guest/Contributor** – Views wishlists, contributes by purchasing items or pooling funds, uploads event media
- **System Administrator** – Manages platform security, affiliate integrations, and user issues
- **Payment Processor (Stripe Connect)** – Handles financial transactions including guest payments and gift purchases

Secondary Actors:

- **Retailers** (Amazon, eMag, Altex, etc.) – Provide product listings and process gift orders through affiliate programs

- **Affiliate Networks** (ProfitShare, Amazon Affiliates, etc.) – Facilitate commission earnings from purchases
- **Media Storage Service** – Stores and manages images and videos uploaded by event participants

3. Use Cases

3.1 Event Organizer/Celebrant

- **Create Wishlist**: Add desired gifts from affiliate retailers with funding goals
- **Manage Wishlist**: Update, remove, or prioritize items
- **Receive Contributions**: Accept payments and track contributions from guests
- **Track Gift Purchases**: View which gifts have been funded or purchased in real-time
- **Withdraw Funds**: Transfer received cash contributions to personal account

3.2 Guest/Contributor

- **View Wishlist**: Browse the celebrant's wishlist, see purchased items and contribution progress
- **Purchase a Gift**: Select and buy a gift directly through the platform
- **Contribute to a Gift Pool**: Add money to partially funded gifts
- **Send a Cash Gift**: Transfer money directly to the celebrant via credit card
- **Upload Event Media**: Share photos/videos from the event in a shared gallery

3.3 System Administrator

- **Monitor Transactions**: Ensure secure and compliant payment processing
- **Manage Users**: Handle issues related to user accounts
- **Oversee Affiliate Integrations**: Ensure proper tracking of commissions
- **Enforce Security & Privacy**: Implement necessary protections for user data

3.4 System Functions

- **Update Wishlist Status**: Automatically mark items as "purchased" to prevent duplicates
- **Process Payments**: Securely handle transactions and disburse funds
- **Integrate Affiliate Links**: Generate affiliate-tracked URLs for wishlist items
- **Store Media**: Manage photo/video uploads and sharing permissions

3.5 Payment Processor (Stripe Connect)

- **Process Payments**: Handle guest contributions securely

- **Disburse Funds**: Transfer cash gifts to celebrants or retailers
- **Prevent Fraud**: Ensure compliance with financial regulations

4. Key Relationships

- Event Organizer interacts with System to create wishlists and track contributions
- Guest interacts with System to contribute funds, view wishlists, and upload media
- System pulls product data from Retailers and processes payments via Stripe
- System integrates with affiliate networks to generate revenue

5. System Complexity

High, due to:

- Integration with external systems (payment gateways, affiliate APIs)
- Real-time synchronization requirements
- Security and privacy considerations for financial transactions
- Media storage and sharing capabilities

System Requirements Documentation:

- Used chatGPT for generating Problem description, and to beautify the format.

Class Diagram Documentation:

- Used Claude 3.7 Sonnet to generate .mermaid code that generates the diagram in draw.io.
- Modified the generated diagram to make it understandable, to format it according to our specific use case.

Use Case Diagram Documentation:

- Used Claude 3.7 Sonnet to generate the use case diagram. The result was in the wrong format. We used this prompt:
- Make a use case diagram for this. All use cases should be in the same single system (square). <<Project Description>>
- The resulting diagram was in the wrong format, so we used the following prompt:
- I mean use case diagram, the one with the actors and use cases
- We then used the generated picture as a basis for creating our own Use Case Diagram using Draw.io

Pros:

- Allowed for quick prototyping within a limited timeframe.
- Provided a relatively solid basis for creating the diagram.

Cons:

- Inaccurate diagram and overlapping use cases and connections.
- AI tools require testing multiple Generative AI models for the best results. In our case, we settled on Claude 3.7 Sonnet. We've experimented with chatGPT and Deepseek as well.