MAD 2 Project Report

Personal Details

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Presentation video:

📹 Presentation Video.mkv

Project Details

This was a fascinating and distinct problem statement that I enjoyed bringing to life with my app. I tackled the issue by creating a flowchart to outline the pages. After that, I set up a kanban board to break down each component and organize the project based on its dependencies.
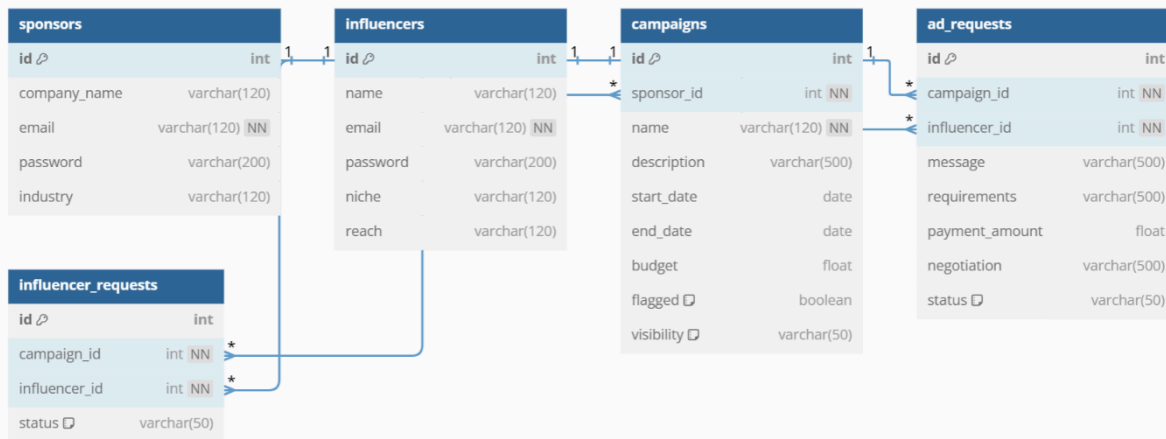
Technologies Used

Backend:

- **Flask:** Framework for building web applications and REST APIs.
- **SQLAlchemy:** ORM for interacting with databases using Python objects.
- **Flask-Caching:** Provides caching support to improve the performance of Flask apps.
- **Flask-JWT-Extended:** Manages JSON Web Tokens (JWT) for secure authentication and authorization.
- **Celery:** Task queue for managing asynchronous tasks and scheduling.
- **Redis:** In-memory data structure store for caching, message brokering, and task queue backends.
- **MailHog:** Email testing tool to capture and view emails sent by the application during development

Frontend

- **Flask-CORS:** Allows the frontend to make cross-origin API calls to the backend without security issues.

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DataBase Schema

API Endpoints

- **Admin APIs**

  1. **Admin Login API**
     Route: /api/admin/login
     Purpose: Allows an admin to log in using a predefined password.

  2. **Admin Dashboard API**
     Route: /api/admin/dashboard
     Purpose: Provides an overview of campaigns, sponsors, influencers, and ad requests for admins.

  3. **Campaign Flagging API**
     Route: /api/campaign/<int:id>/flag
     Purpose: Allows admins to flag or unflag campaigns.

- **Sponsor APIs**

  4. **Sponsor Registration API**
     Route: /api/sponsor/register
     Purpose: Registers a new sponsor.

  5. **Sponsor Login API**
     Route: /api/sponsor/login
     Purpose: Authenticates a sponsor.

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6. **Sponsor Dashboard API**
   Route: /api/sponsor/dashboard
   Purpose: Provides the sponsor's campaigns.

7. **Sponsor Campaign Details API**
   Route: /api/sponsor/campaign/<int:id>
   Purpose: Retrieves details of a specific campaign.

8. **Influencer Details API**
   Route: /api/influencers
   Purpose: Retrieves a list of influencers for sponsors to view.

- **Campaign Management APIs**

9. **Get Campaign Details API**
   Route: /api/campaign/<int:id>
   Purpose: Retrieves detailed information about a specific campaign.

10. **Create Campaign API**
    Route: /api/campaign/create
    Purpose: Allows sponsors to create a campaign.

11. **Update Campaign API**
    Route: /api/campaign/update/<int:id>
    Purpose: Updates campaign details.

12. **Delete Campaign API**
    Route: /api/campaign/delete/<int:id>
    Purpose: Deletes a campaign.

- **Ad Request APIs**

13. **Sponsor Ad Details API**
    Route: /api/sponsor/ad/<int:id>
    Purpose: Retrieves details of a specific ad request.

14. **Create Ad Request API**
    Route: /api/ad/create/<int:id>
    Purpose: Allows sponsors to create ad requests for campaigns.

15. **Update Ad Request API**
    Route: /api/sponsor/ad/<int:id>
    Purpose: Updates details of an ad request.

16. **Delete Ad Request API**
    Route: /api/sponsor/ad/<int:id>
    Purpose: Deletes an ad request.

- **Influencer APIs**

17. **Influencer Registration API**
    Route: /api/influencer/register
    Purpose: Registers a new influencer.

18. **Influencer Login API**
    Route: /api/influencer/login
    Purpose: Authenticates an influencer.

19. **Influencer Profile API**
    Route: /api/influencer/profile
    Purpose: Retrieves or updates an influencer's profile.

20. **Influencer Dashboard API**
    Route: /api/influencer/dashboard
    Purpose: Provides public campaigns and influencer-specific ad requests.

● **Ad Request Management APIs**

21. **Create Ad Request API**

    Route: /api/adrequest/create/<int:id>

    Purpose: Allows influencers to join a campaign.

22. **Handle Campaign Requests API**

    Route: /api/campaign/request/<int:request_id>

    Purpose: Sponsors can accept, reject, or delete ad requests.

23. **Accept Ad Request API**

    Route: /api/adrequest/accept/<int:request_id>

    Purpose: Influencers accept ad requests.

24. **Reject Ad Request API**

    Route: /api/adrequest/reject/<int:request_id>

    Purpose: Influencers reject ad requests.

25. **Complete Ad Request API**

    Route: /api/adrequest/complete/<int:request_id>

    Purpose: Marks an ad request as completed.

26. **Negotiate Ad Request API**

    Route: /api/adrequest/negotiate/<int:request_id>

    Purpose: Influencers negotiate terms of an ad request.