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Department of Computer Science and Engineering (Data Science)

Mini-project presentation on project titled

SurveyGram Survey at Ease

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Abstract

In today's data-driven world, traditional survey tools often struggle with low engagement and biased results due to limited personalization and adaptability. The proposed system addresses these challenges with a next-generation platform. It integrates direct communication, real-time analysis powered by modern day tools, and a user-friendly interface akin to social media. Verified respondents ensure authentic feedback, empowering researchers and businesses to gather targeted insights for market schemes, product launches, and user reviews. Robust prediction and analysis tools facilitate data-driven decision-making with hassle-free reports and charts. The platform guarantees authenticity through real-time verification and structured participant payouts, ensuring genuine survey results and actionable feedback in organizational contexts.

Literature Survey

Name of the paper	Author(s)	Methodology	Advantages	Disadvantages
The Impact of Incentives on Response Rates and Data Quality in Online Panels	E. Singer, M. P. Couper	Random assignment of cash incentives ($0.50 to $3.00) to survey participants	Reduced incidence of trap question failures among qualified respondents	Limited improvement in overall respondent behavior; no clear association with eligibility or break-off rates
Survey Participation: Motivations and Barriers	E. A. Blair, S. Burton	Analysis of factors influencing survey participation	Identifies strong motivators and barriers, providing insights for improving participation strategies	Variability in the effect of monetary incentives depending on survey context and demographic
Effects of Incentives on Web Survey Response Rates and Data Quality	J. M. Bosnjak, M. Tuten	Examination of financial incentives' impact on response rates and data quality	Monetary incentives generally increase response rates	Higher incentives can attract less attentive participants, potentially affecting data quality
The Use of Monetary Incentives in Online Panels	R. A. Peterson	Review of monetary incentives in online panels	Effective in increasing response rates	Mixed impact on data quality; larger incentives can attract reward-focused participants
Improving Survey Participation with Gamification	R. C. Goddard, S. R. Lee	Use of gamification elements (points, badges, leaderboards) in surveys	Makes surveys more engaging, leading to higher response rates and better data quality	Gamification may not appeal to all demographics; potential for novelty effects to wear off over time

Existing Systems

Currently, there are several established survey platforms that aim to provide comprehensive survey solutions. However, these platforms are often constrained by limitations in user reach, user interface capabilities, restrictions on survey types, and methodologies for collecting user data. These constraints can hinder users seeking robust and customizable survey solutions that meet their specific needs. Additionally, concerns related to data privacy and integration capabilities with other systems further underscore the complexities associated with existing survey platforms.

Some platforms and their drawbacks

- SurveyMonkey:
  - Customization Constraints
  - Data privacy
- Google Forms:
  - Integration challenges
  - Survey type limitation

Proposed System

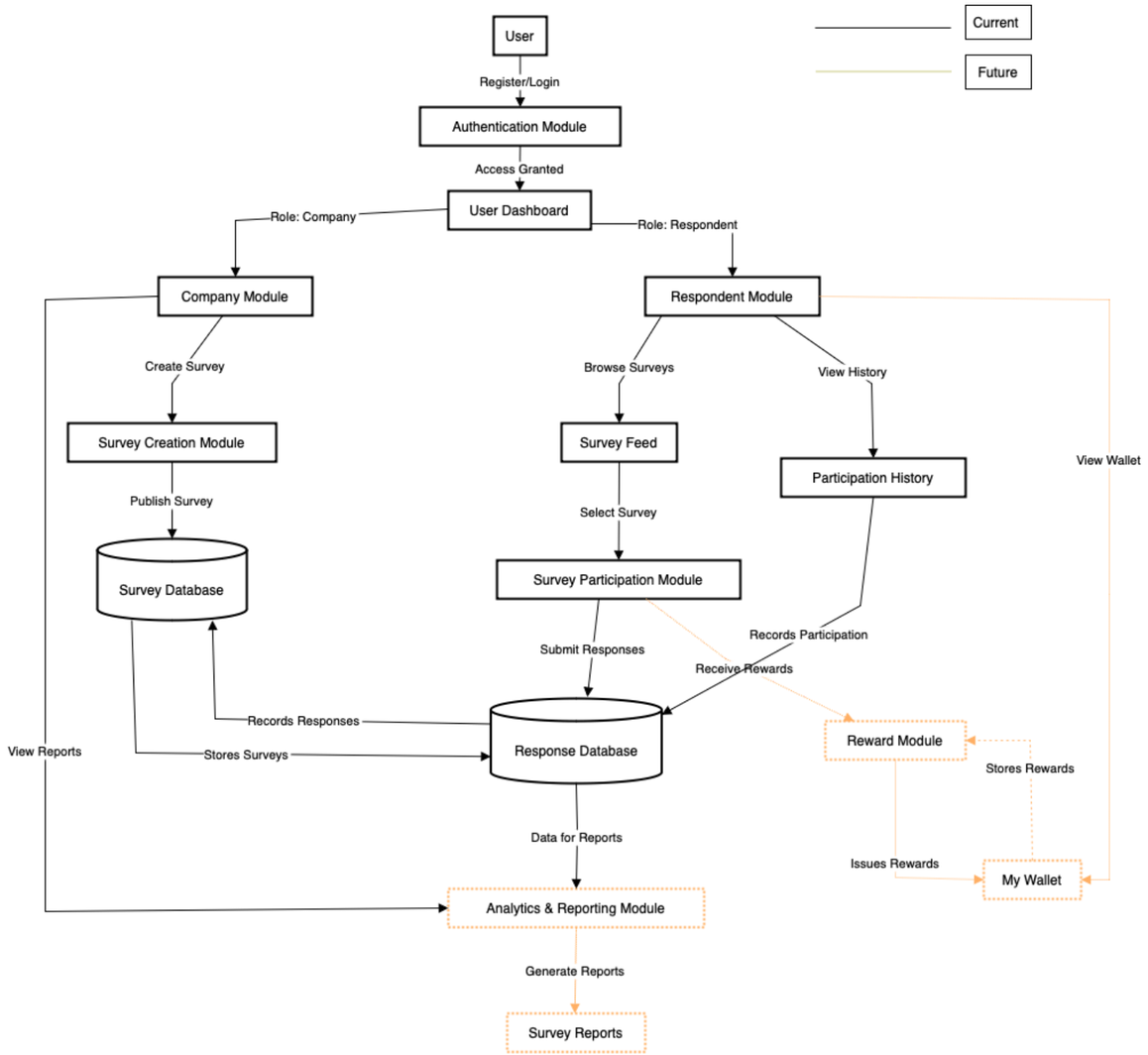
- **Extensive Reach**: Unlike the traditional survey methods, SurveyGram aims to reach a wider range of audience which will provide higher volume of responses, and quality of data.

- **Rewarding system**: SurveyGram brings a unique methodology to encourage individual in taking part in the surveys i.e., providing the user with certain reward upon a valid and authenticated participation.

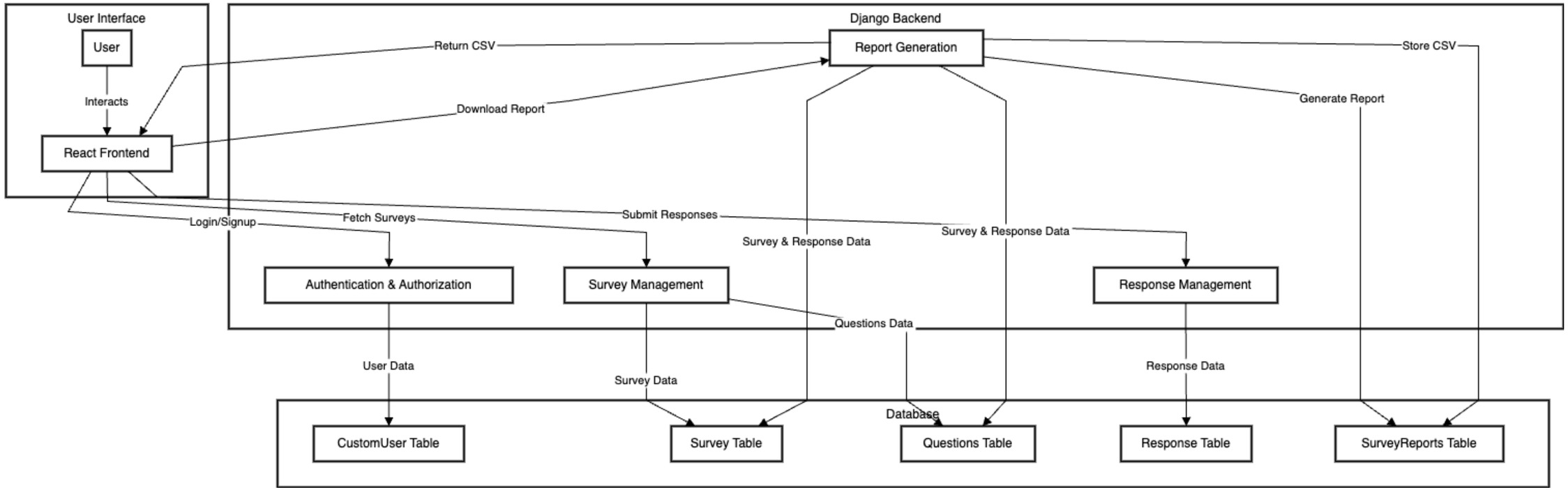
- **User-Interface**: SurveyGram's social media akin UI design enable a *hustle* free experience to the respondents as well as Companies to complete all the actions

- **Data Profiling**: SurveyGram, in it's future updates, aims on providing the companies with a details response report in the form of data profile which will further enhance the understanding and decision making of company's.

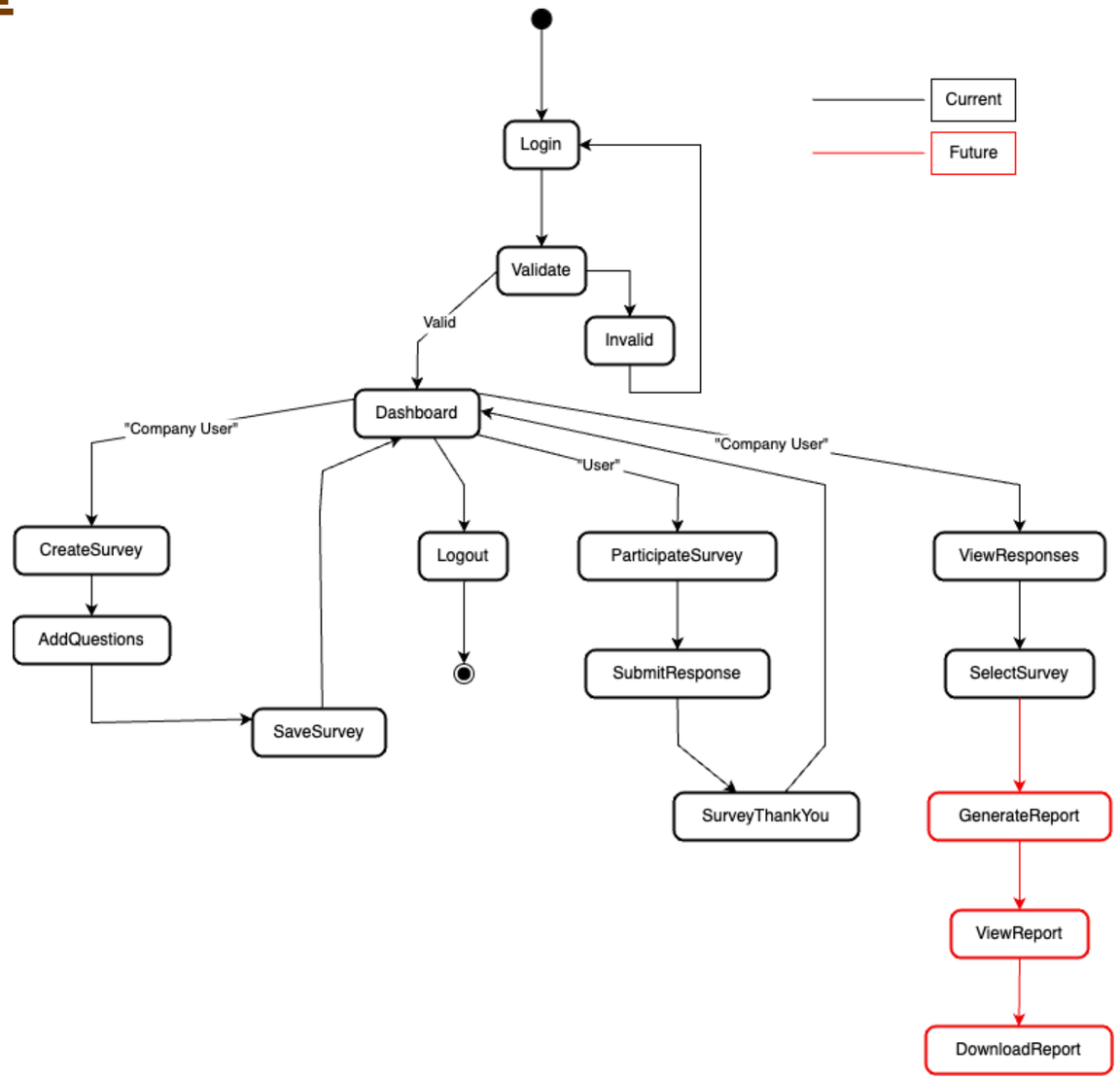
System Architechure



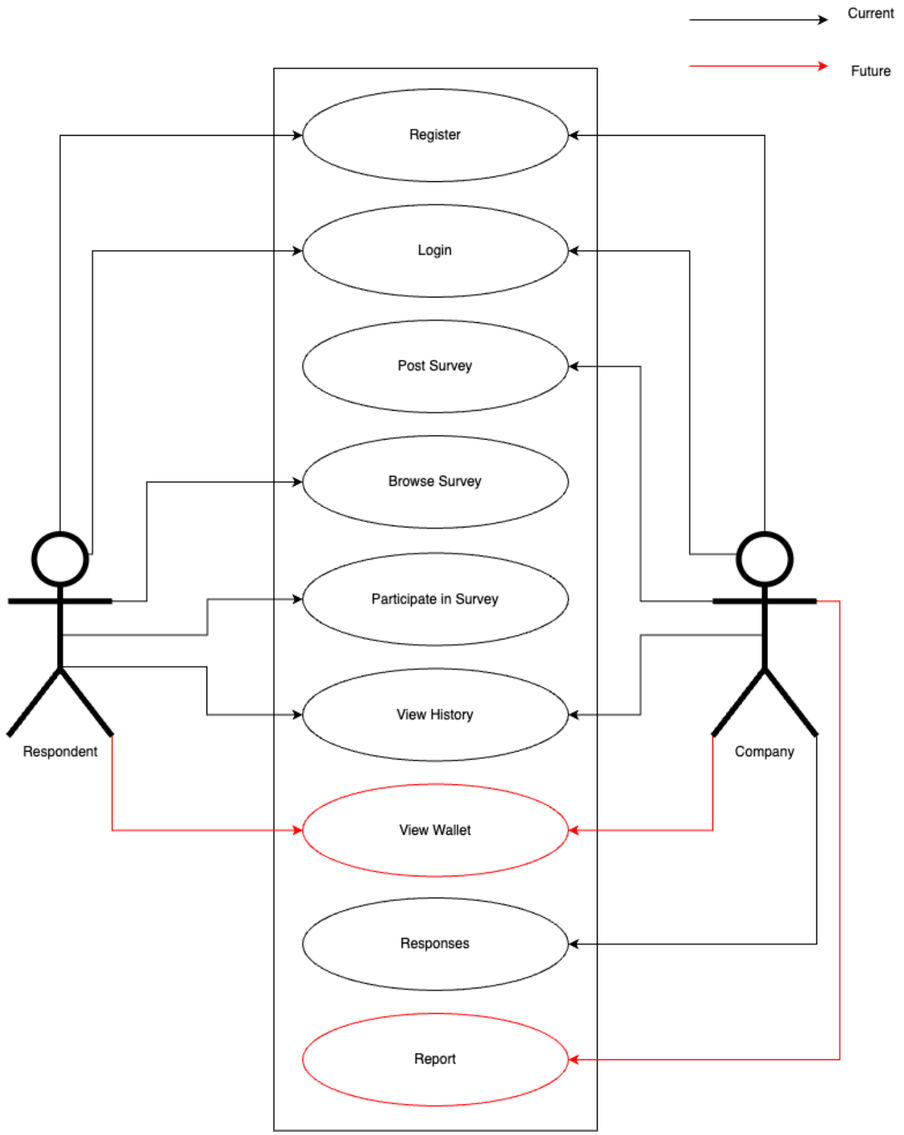
Data Flow Diagram



Activity Diagram



Use-Case Diagram



Modules Identified

The currently identified modules are:

- **User Management Module:**
  Handles user registration, authentication, and profile management.

- **Survey Management Module:**
  Allows companies to create, manage, and publish surveys.

- **Reward Management Module:**
  Manages the allocation and distribution of rewards to users.

- **Survey Participation Module:**
  Facilitates user interaction with available surveys.

- **Data Analysis and Reporting Module:**
  Analyzes collected survey data and generates reports for companies.

Implementation

- User-Interface
- Database design and management
- Backend implementation [link]
- Frontend-Implementation [link]
- Security and privacy
- Data profiling

System Requirements

Software requirement

- **Operating System:** Windows, MacOS or Linux
- **Integrated Development Environment:** Microsoft's Visual Studio Code
- **Programming Languages and Frameworks:**
  - **Front-End:** Basic wed development tools*
  - **Back-End:** Python with Django or Flask
- **Version Control:** Git for aligning code versions
- **API Development:** API testing tool such as Postman*

Software requirement

- **Processor:** Intel i5 or Apple's silicon chip
- **RAM:** 6GB or higher
- **Storage:** SSD for faster read and write
- **Graphics:** Processor integrated graphics

**The project will be developed in two versions. Depending on the version, different tools and applications will be used*

Thank You