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**Prime Investor Club Website**

***Introduction***

Prime Investor Club is a website that has a forum available for selected members, who are top investors, to post investment ideas.

* Objective of the ‘Prime Investor Club’: to obtain more investment ideas that will be used in the future by the Simmons Investment firm
* Best rated idea will win a prize of $5,000 dollars
* The Administrator will have to verify member credentials prior to membership approval
* Basic requirements and features for each member:
  + Members will have to submit two ideas per month
  + Rate ideas on a scale of 1-5
  + Add comments to other ideas
  + Pay annual $1,000 dollar membership fee

To achieve the desired outcome, a detailed and carefully considered process is needed. To support the process of creation and implementation of this project, diagrams will provide a visual representation and a guide of the process.

Starting with the use cases to understand how “actors” will interact with the website and with each other, ensuring that there is a shared understanding of the project’s scope and the functionality. Next, the activity diagram will provide a workflow of the system and business process that is necessary to ensure the quality and the dynamics of the system. It provides more detailed steps, that will be performed by each actor in a flow system that will ensure efficiency while going through each step.

The creation of CRC Cards will allow an easier understanding of the collaboration between classes and their responsibilities, which are necessary for a smooth process in this project. These CRC Cards will be used to determine how to construct the class diagram, which will ultimately represent the attributes and relationships between classes.

***Diagrams***

* **Use Case:**

Three main actors in the process of building the website for Simmons Investment Firm:

1. Web Developer
2. Administrator
3. Member

Each of these actors have specific tasks to be completed in order to achieve the desired outcome from this project.



The actors in this use case will be represented by swim lanes in the activity diagram. The diagram will display detailed information on each actor’s (Member, Administrator, and Web Developer) function, responsibility, as well as a detailed sequence of actions showing the flow of the processes.

* **Activity Diagram**

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As shown in this activity diagram, the flow of each action in the system is explained in detail, following logic that directs what happens after each step and the expected outcome/action. Having the visualization makes it easier for the team to understand each step and possible outcome of each action - including all parties’ responsibilities.

Each actor has its own role in determining how the Prime Investor Club will operate. In order to understand the Prime Investor Club’s operation, CRC cards will be used to help guide the process. They will provide details and structure for each class belonging to the activity diagram. This detail comes in the form of class type, class responsibility and collaboration.

* **CRC Cards:**

***Class: Member***

* Responsibility:
  + Sign-up for the website
  + Provide credentials for approval
  + Submit 2 ideas per month
  + Comment and vote on other member’s ideas
  + Revise and re-submit ideas
  + Track the status of idea submissions
  + Fill out credit card information for membership payment
  + Pay membership fee
  + Cancel membership
* Collaboration:
  + Administrator – for idea submissions and any issues
  + Subscription page – for becoming a member of the website

***Class: Administrator***

* Responsibility:
  + Define roles and permissions for the website
  + Select and approve members
  + Track member activity (comments and posts)
  + Oversee member activities (warn/suspend/remove if needed)
  + Manage idea submissions
  + Check the vote counts every week
  + Handle all user-related problems
  + Set up the annual date for membership fee collection
  + Verify credit card information
  + Ensure security of user data
  + Select the best idea
  + Notify the winner
  + Use PLAID (third party payment company) to verify winner’s bank information (KYC/AML)
* Collaboration:
  + Web developer – for the technical and access credentials
  + Member – for all user related aspects and idea submissions

***Class: Web Developer***

* Responsibility:
  + Build website design
  + Add functions to the website
  + Add management features
  + Add permissions to the website (who can see and access what info)
  + Implement security measures
  + Add a feature that allows for credit card payment
  + Security measure for credit card payment
* Collaboration:
  + Administrator – to decide website functions, designs, and all technical aspects

***Class: Website main page***

* Responsibility:
  + Allow users to get basic information about the website
  + Have an icon that potential members can click to sign up for the competition
* Collaboration:
  + Web Developer
  + Subscription Page
  + Members

***Class: Subscription page***

* Responsibility:
  + Members sign-up for the website on this page
* Collaboration:
  + Members
  + Administrator
  + Web Developer
  + Website main page

***Class: Idea Submission Page***

* Responsibility:
  + Store information about submitted ideas
  + Manage comments and replies
  + Interface with stock price data derived from Bloomberg terminal
* Collaboration:
  + Member
  + Administrator

***Class: Payment***

* Responsibility:
  + Process online payments for membership fees
  + Validate credit card info
  + Manage payments and transactions
  + Handle payment related errors
  + Provide secure and reliable payment processes
  + Validate info from prize winner
* Collaboration:
  + Member – paying for membership and entering credit card info
  + Administrator – handling membership payments and final prize
  + Web Developer - implementation of code for secure payment system
  + Member – membership validation for payments

Utilizing the classes, responsibilities, and collaborations defined in the CRC cards, a class diagram that includes attributes and methods for each class was created.

*  **Class Diagram**

***Conclusion***

In order for the Prime Investor Club to launch successfully, web developers, administrators, and members/applicants all must adhere to their roles. Given the many roles and responsibilities of each actor, a system in place is needed to coordinate design and operations. The diagrams shown in this report are visual representations of the steps, functions, and foundation of the website. They allow for a clear understanding of the system, responsibilities, collaborations, and activity of each actor.

Use cases describe, in a high-level perspective, the functions and scope of each actor. The activity diagrams describe detailed processes, showing the flow and actions, divided by swim lanes that represent the actors. The CRC cards will serve as base for the teams to understand each other’s responsibilities, and how they will collaborate during the project, as well as the systems interactions and function. The class diagram shows the attributes and methods of each class that will be utilized as a base for modeling, based on the CRC cards classes and descriptions.