A DYNAMIC TRIVIA GAME

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CONTENTS

BUSINESS MODEL

The business model of the trivia game app revolves around providing an entertaining and engaging experience for players through a dynamic platform that features user-generated content. The app offers multiple categories for diverse gameplay, a ranking system that fosters healthy competition, and a rewards mechanism for consecutive correct answers, which enhances user motivation. By focusing on entertainment and community engagement, the app aims to maintain user interest and encourage regular participation, creating a sustainable and vibrant gaming experience.

USER – STORIES

To get to the user-stories, we took the functionalities of the game "Trivia Crack" as a basis and from there we took the main ones that could be implemented taking into account the lack of a graphical interface.

1. As a player, I want to choose a question category (history, science, entertainment, etc.) so I can answer questions on a topic that interests me.
2. As a player, I want to earn rewards for correctly answering several questions in a row, so I can stay motivated and achieve achievements within the game.
3. As a player, I want the game to have a ranking system, so I can compare my performance to other players.
4. As a player, I want to have a limited amount of "wild cards" or hints during the game (50/50, hint, skip question), so I can use them on difficult questions.
5. As a user, I want to be able to give ideas for new questions so I can add topics of interest to the game.
6. As an admin, I want to be able to accept questions suggested by users so I can take them into account within the game.
7. As a player, I want to be able to log in within the game, so I can save my progress.
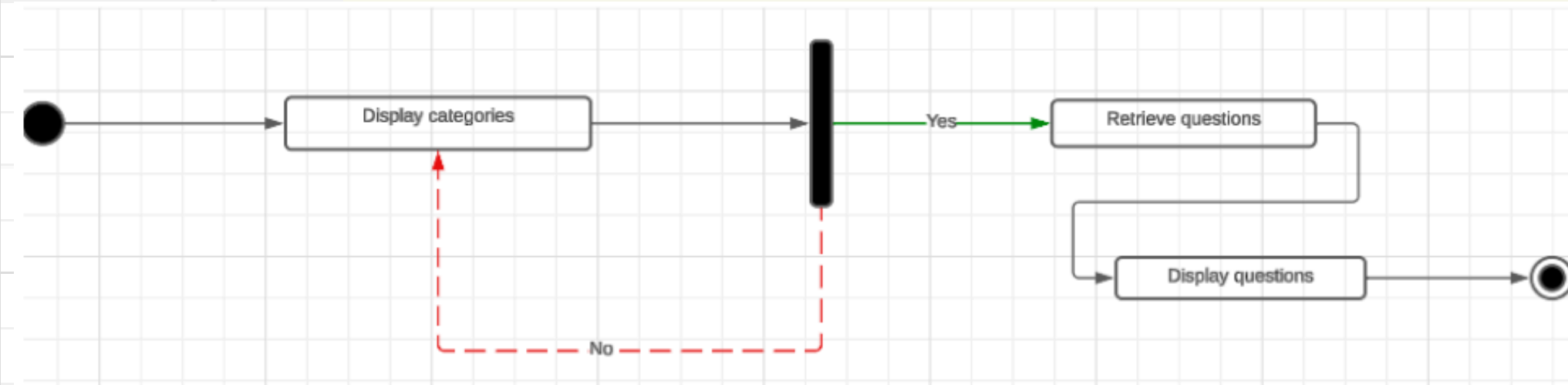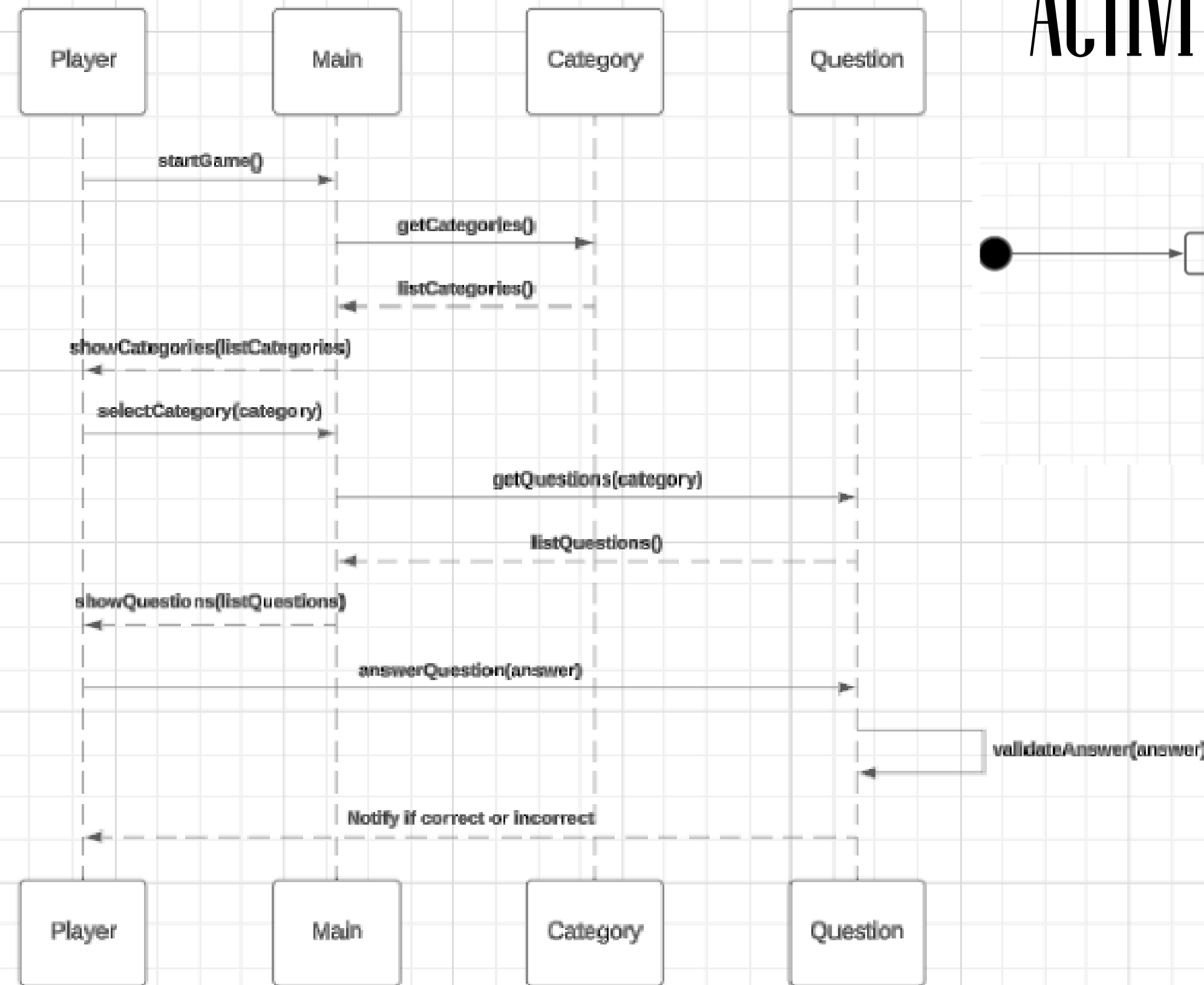
PROCESSES AND COMPONENTS

Processes:

1. User Registration and Login
2. Category Selection
3. Question Answering
4. User-Generated Content Submission
5. Reward System
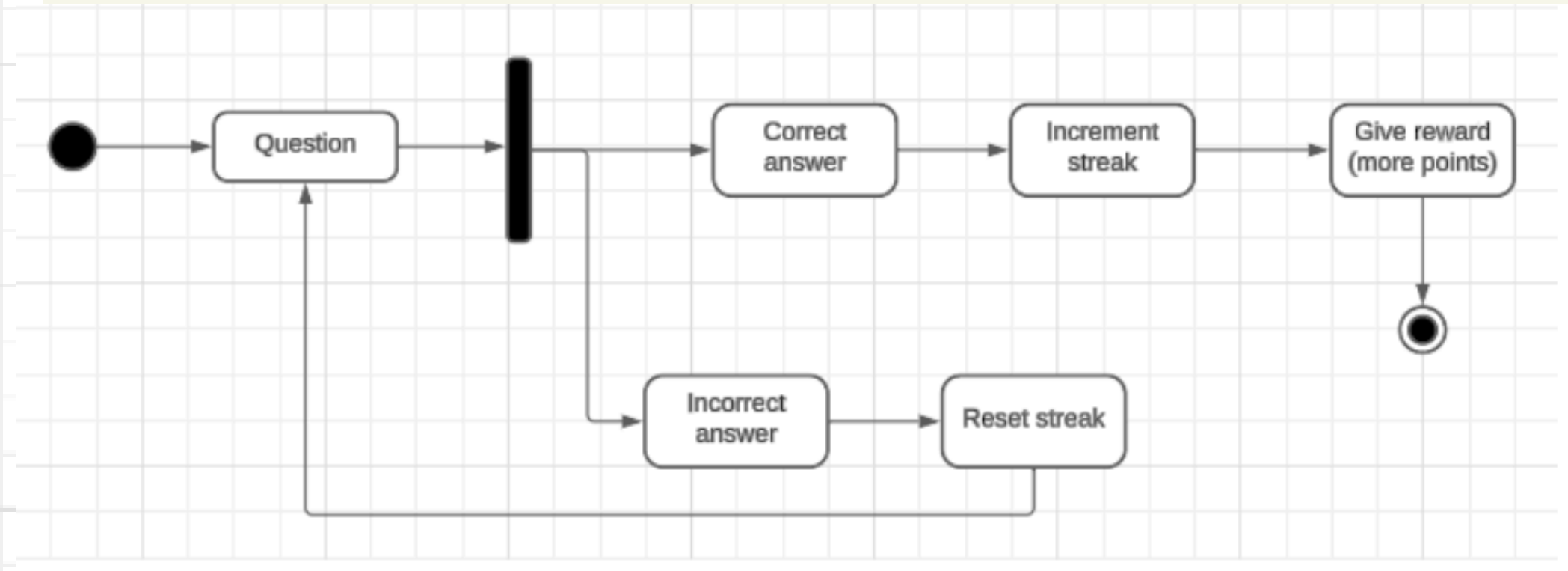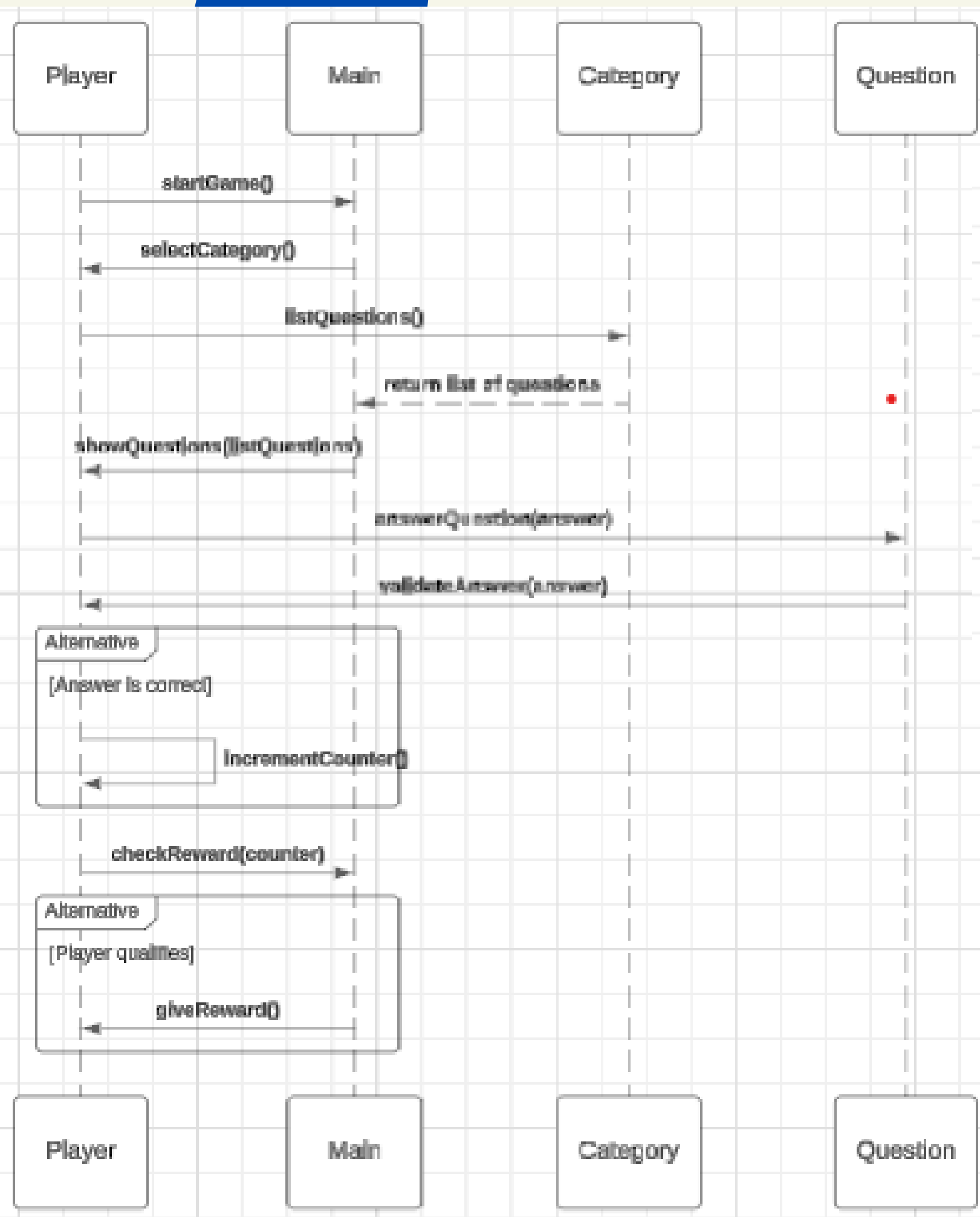6. Ranking System

Components:

1. User Interface
2. User Class
3. Player Class
4. Admin Class
5. Category Class
6. Question Class
7. Ranking Class
8. Database
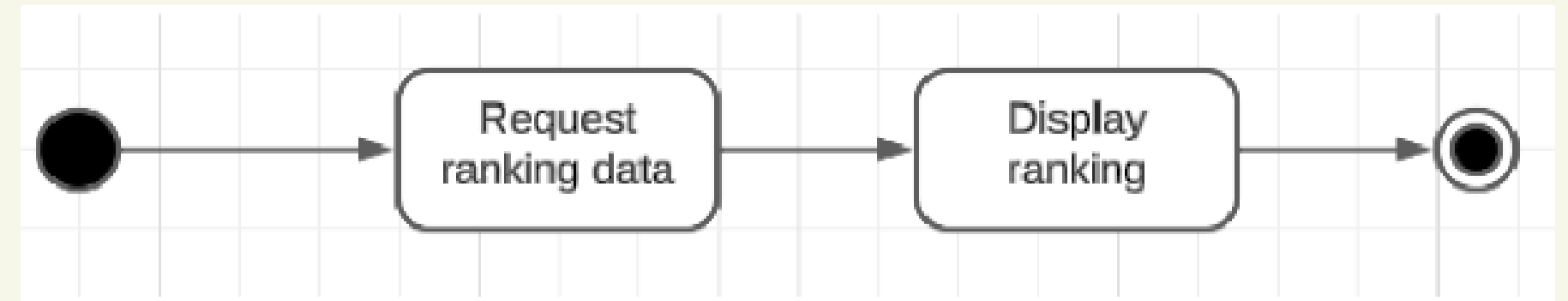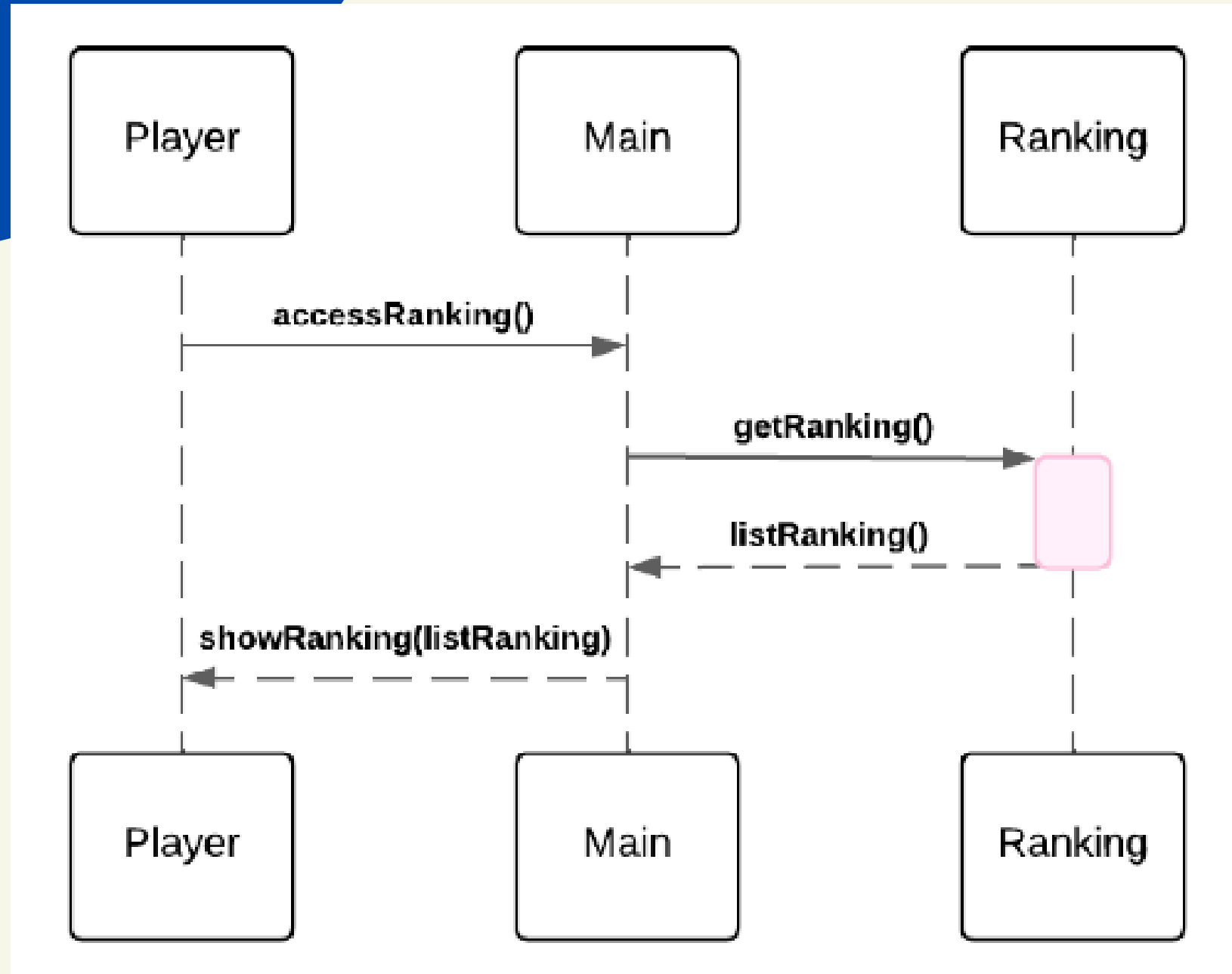
ACTIVITY AND SEQUENCE DIAGRAMS

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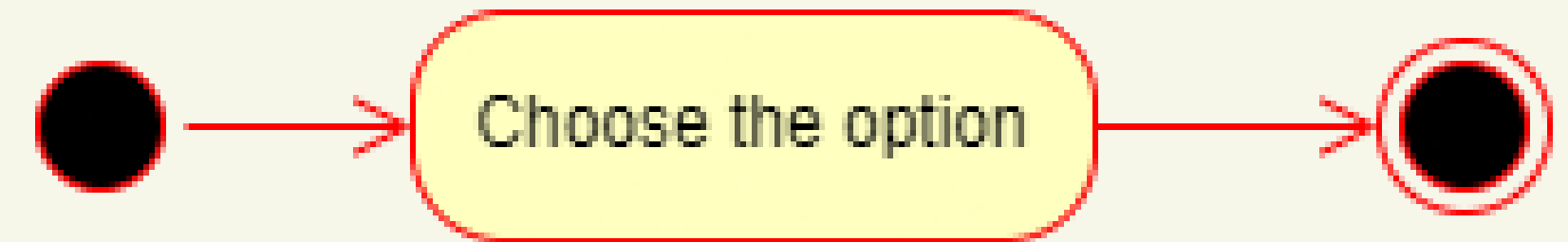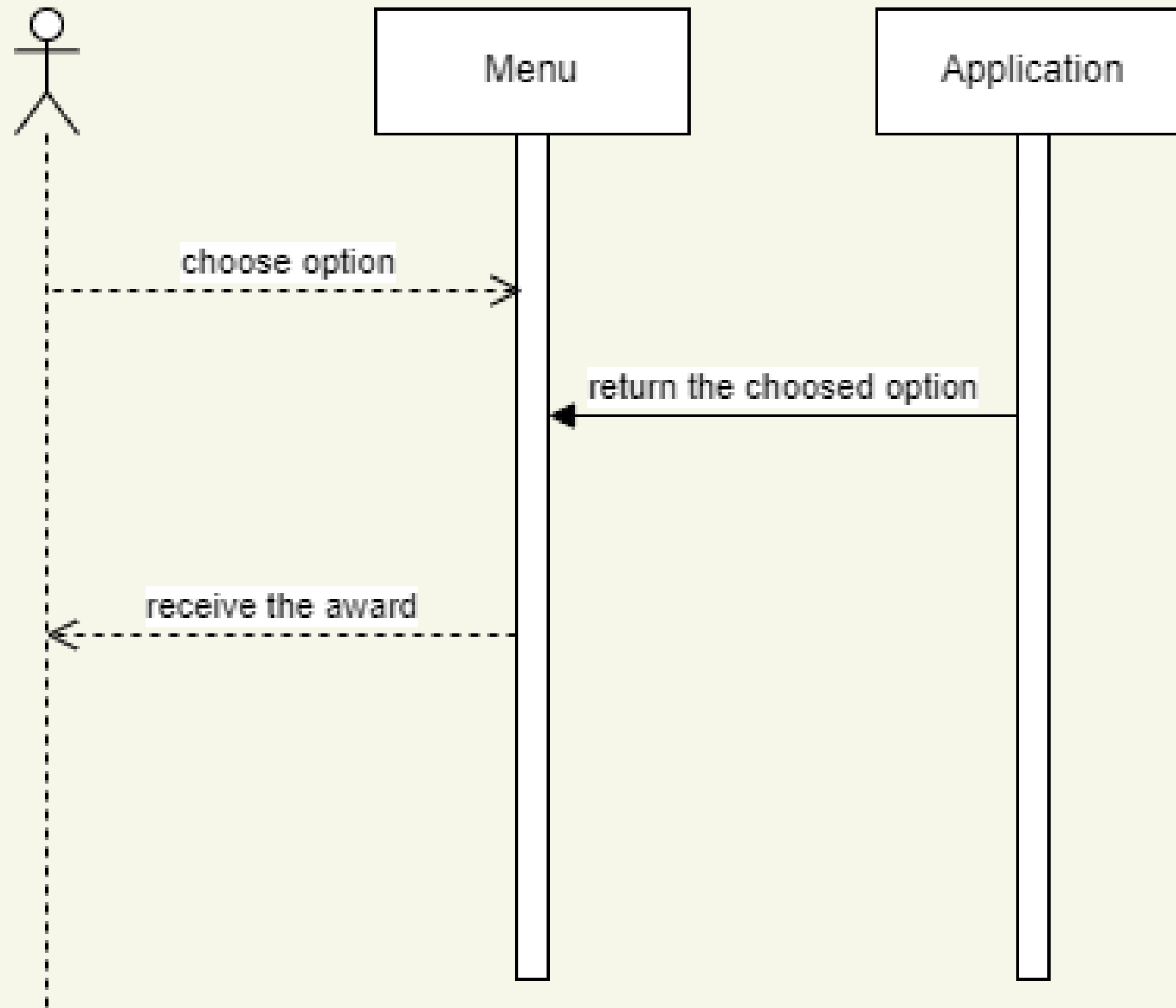
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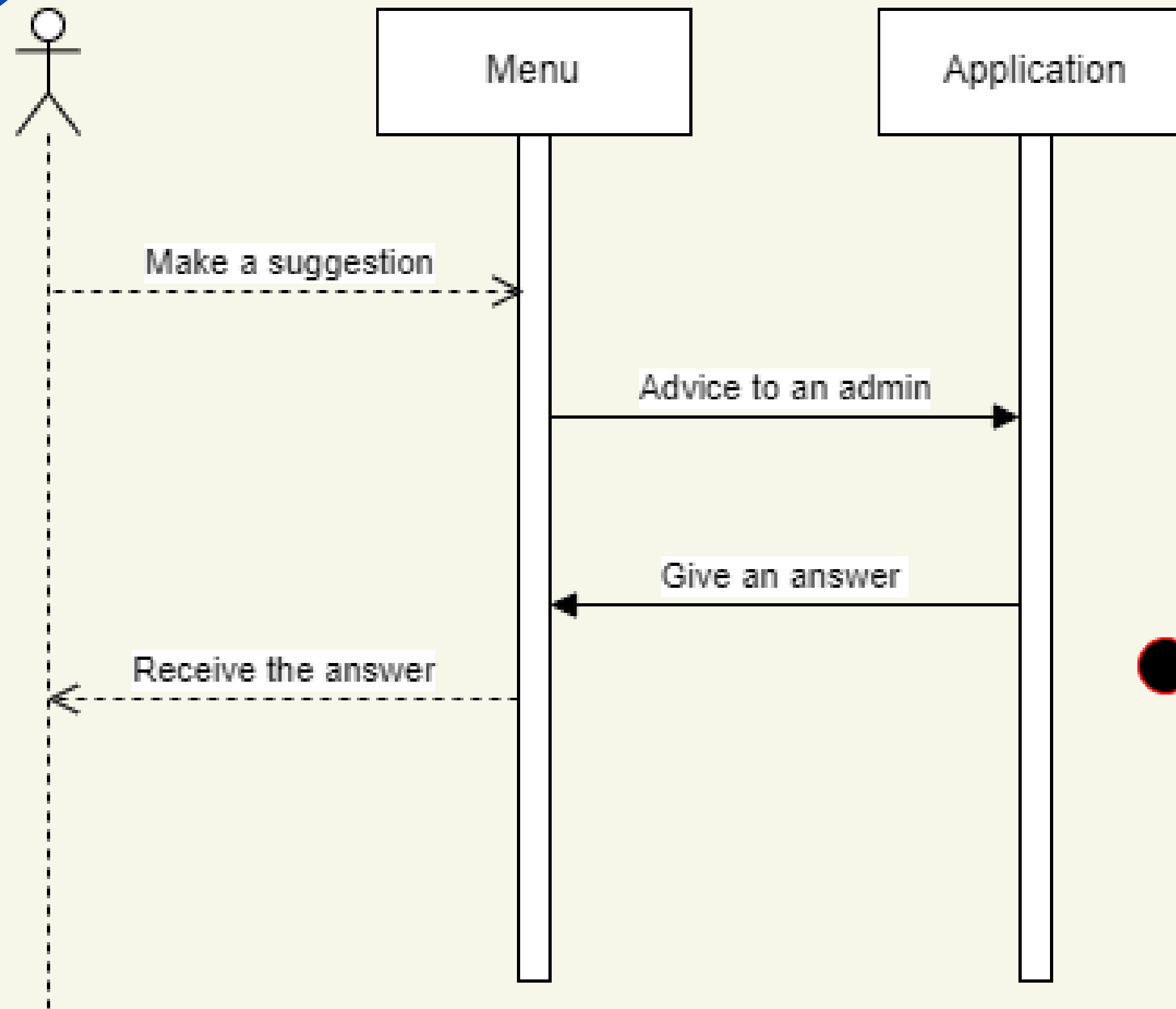
Menu

Application

Make a suggestion

Advice to an admin

Give an answer

Receive the answer

- As a user, I want to be able to give ideas for new questions so I can add topics of interest to the game.

Make a suggestion

Send the request

ACTIVITY AND SEQUENCE DIAGRAMS
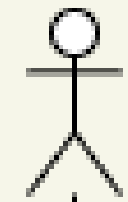
Admin

Search new suggestions

Return the suggestions

Show the suggestions

Aprove or reject

Add the aproved suggestions

Menu

Application

- As an admin, I want to be able to accept questions suggested by users so I can take them into account within the game.

Receive suggestion

Aprove as new question?

no

yes

Add the new question
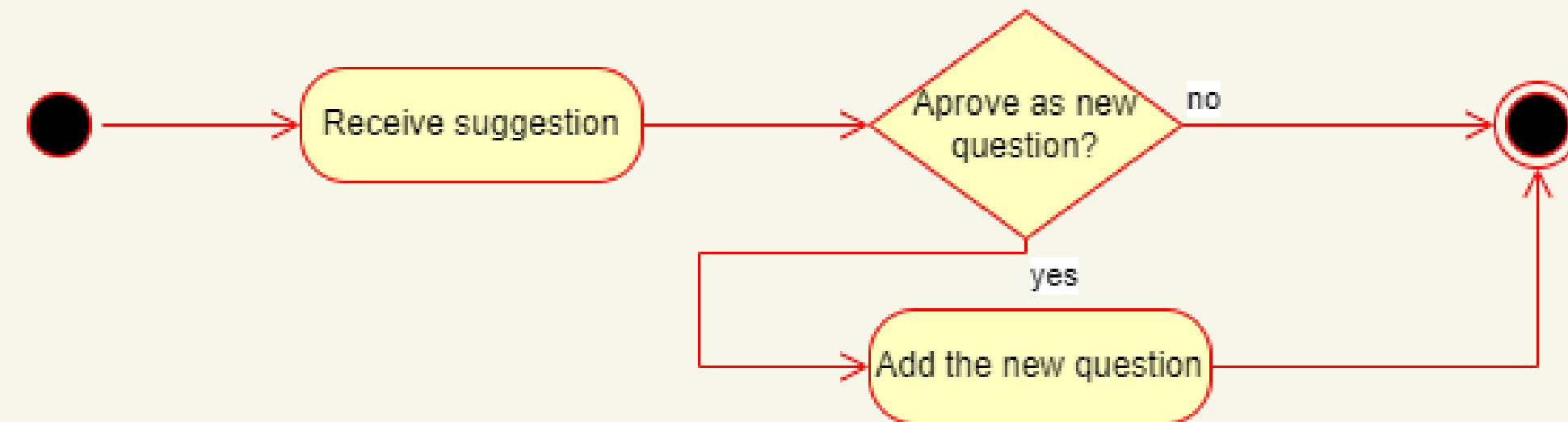
ACTIVITY AND SEQUENCE DIAGRAMS

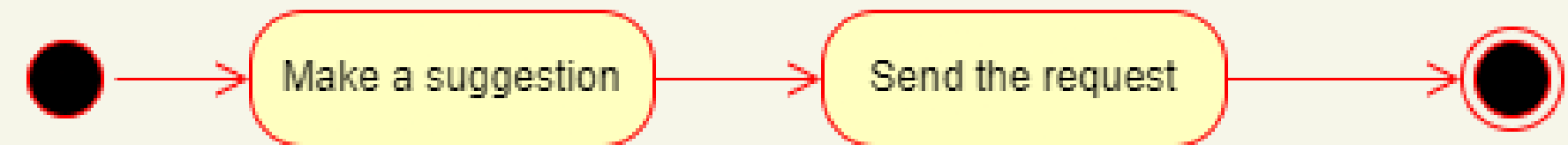- As a player, I want to be able to log in within the game, so I can save my progress.

CRC CARDS

CATEGORY CLASS

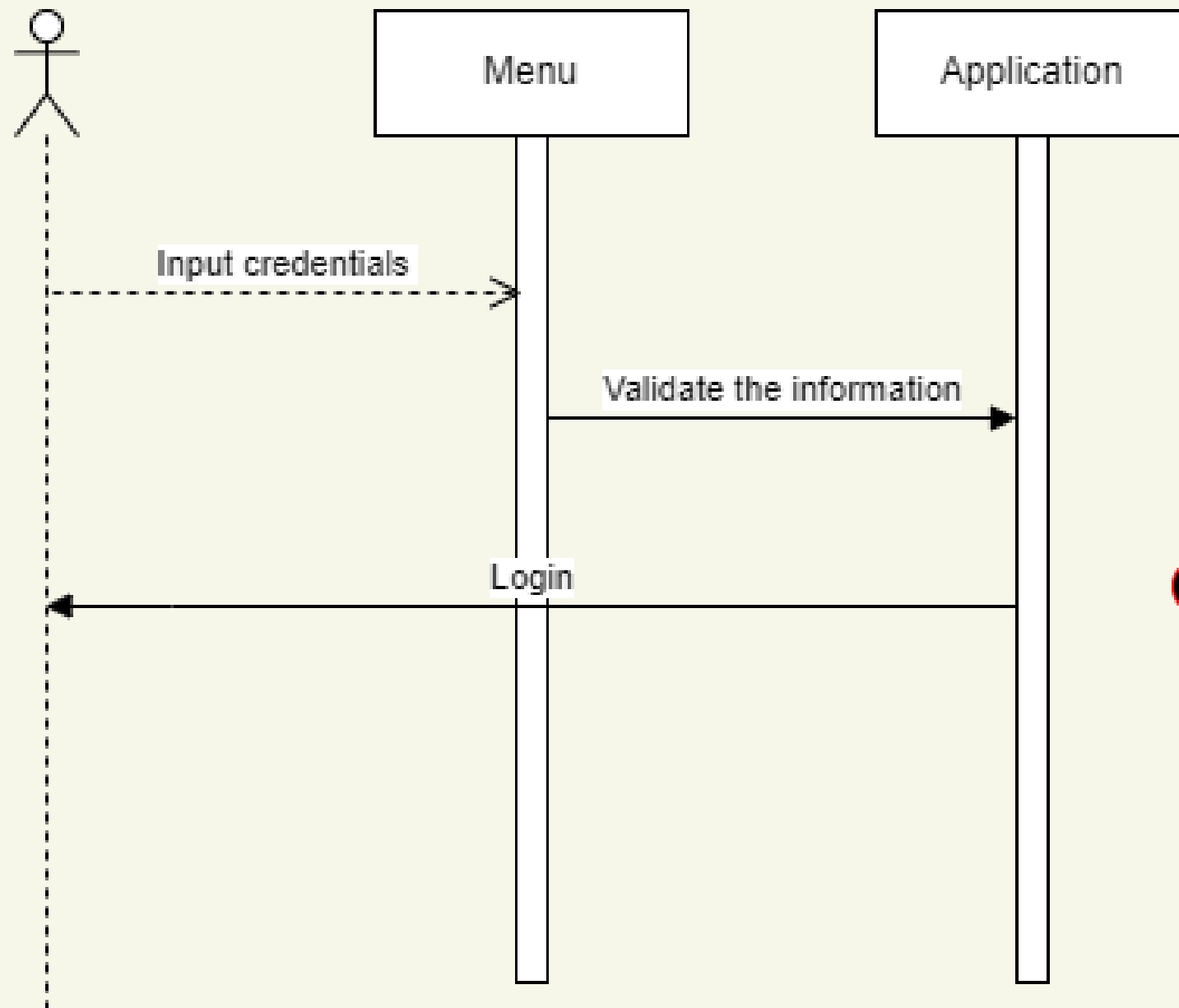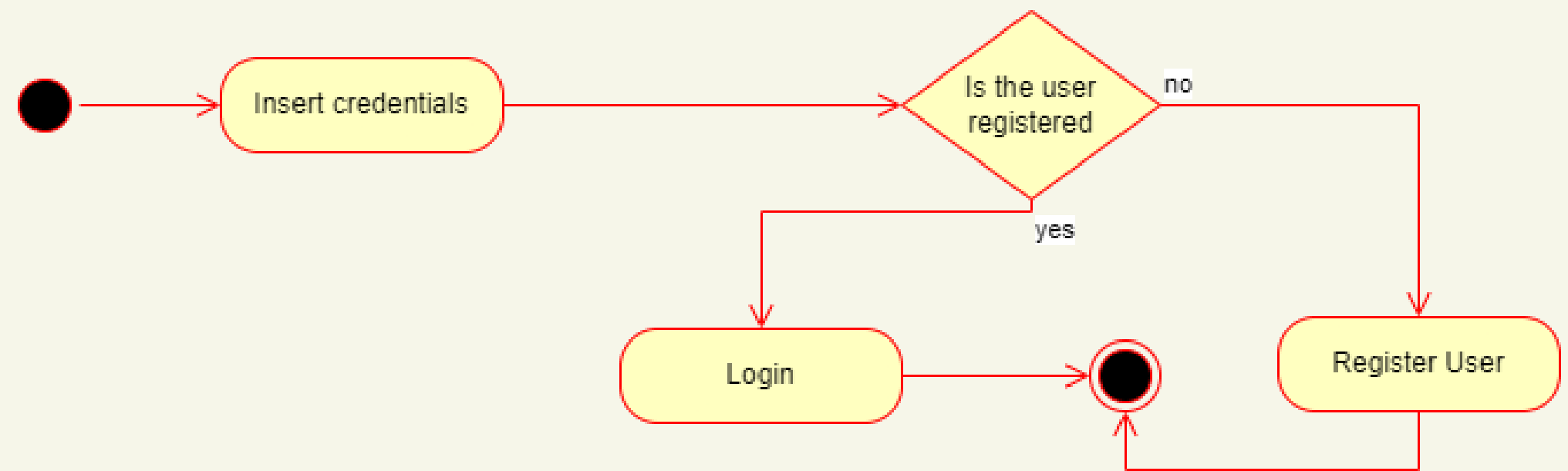|	
- Show the categories - Provide the questions - Save the new added questions	- Admin - Question

RANKING CLASS

- Update scores - Show scores - Save information	- Admin - Player

PLAYER CLASS

- Authentication (login, logout) - Play the game - View the ranking - Suggest questions	- Ranking

QUESTION CLASS

- Validate the answer	- Category

ADMIN CLASS

- Authentication (login, logout) - Play the game - View the ranking - Aprove questions - Add questions - Edit questions - Reject suggestions	- Ranking - Category - Question

CLASS DIAGRAM

User
- username: String
- password: String
- email: String

+ login(): void
+ logout(): void

main

Player
- victories: int
- ArrayList<Question> submittedQuestions: List<Question>

+ playGame(): void
+ submitQuestion(question: Question): void
+ viewRanking(): List<Ranking>
+ checkQuestionStatus(): String

Admin

+ addQuestion(category: Category, question: Question): void
+ editQuestion(category: Category, questionID: int, newQuestion: Question): void
+ deleteQuestion(category: Category, questionID: int): void
+ acceptSubmittedQuestion(category: Category, questionID: int): void
+ rejectSubmittedQuestion(questionID: int): void

Ranking
- playerPosition: int
- playerScore: int
- ArrayList<Player> rankedPlayers: List<Player>

+ updateRanking(player: Player, score: int): void
+ viewRanking(): List<Ranking>

<>
Category
- categoryID: int
- categoryName: String
- ArrayList<Question> questions: List<Question>

+ getCategoryID(): int
+ getCategoryName(): String
+ getQuestions(): List<Question>
+ addQuestion(question: Question): void

Question
- questionID: int
- questionText: String
- correctAnswer: String
- status: String
- ArrayList<String> options: List<String>
- categoryID: int

+ validateAnswer(selectedAnswer: String): boolean
+ getQuestionDetails(): String

Science

Sport

History

Geography

Entertainment

Art

THANKS