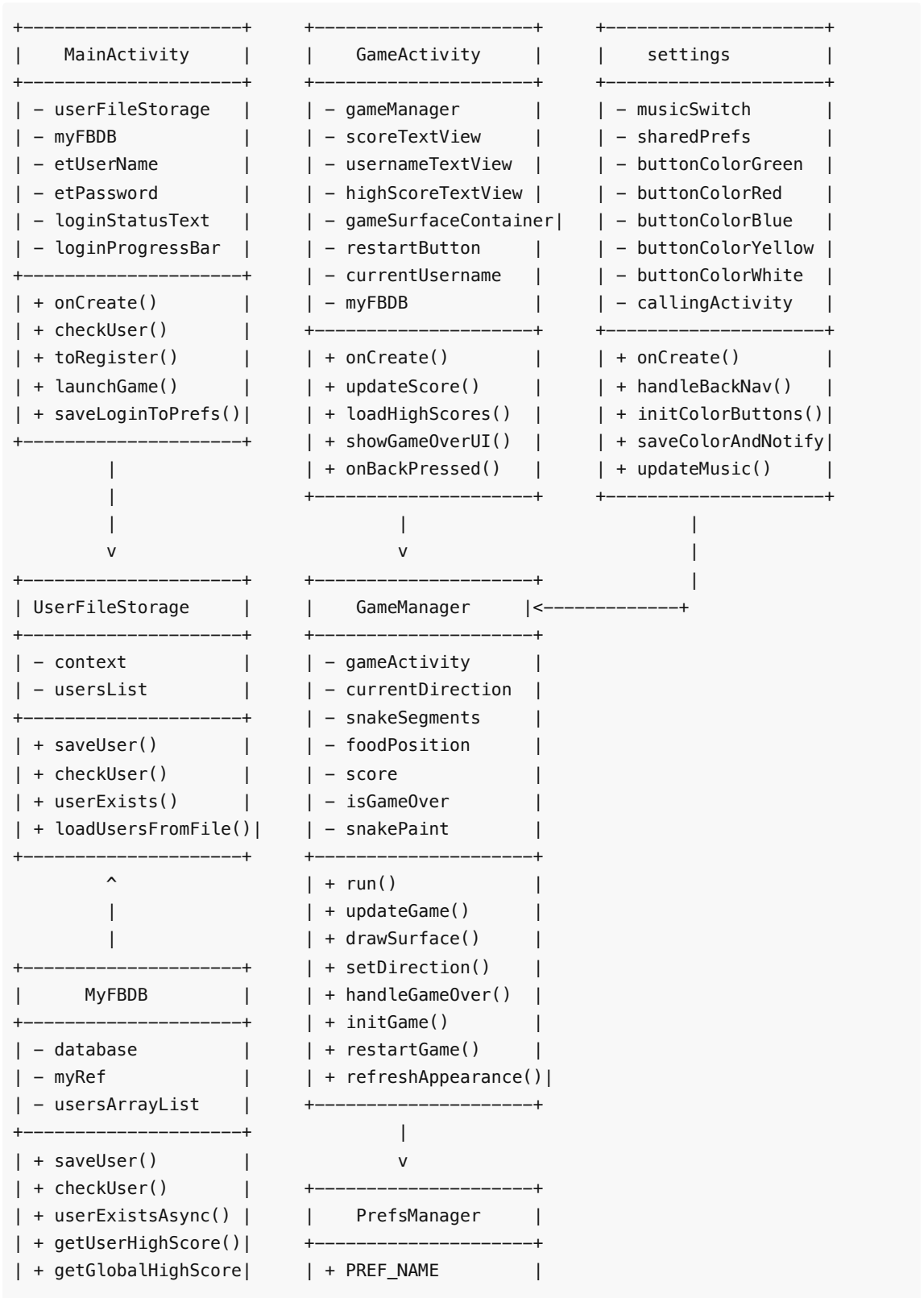
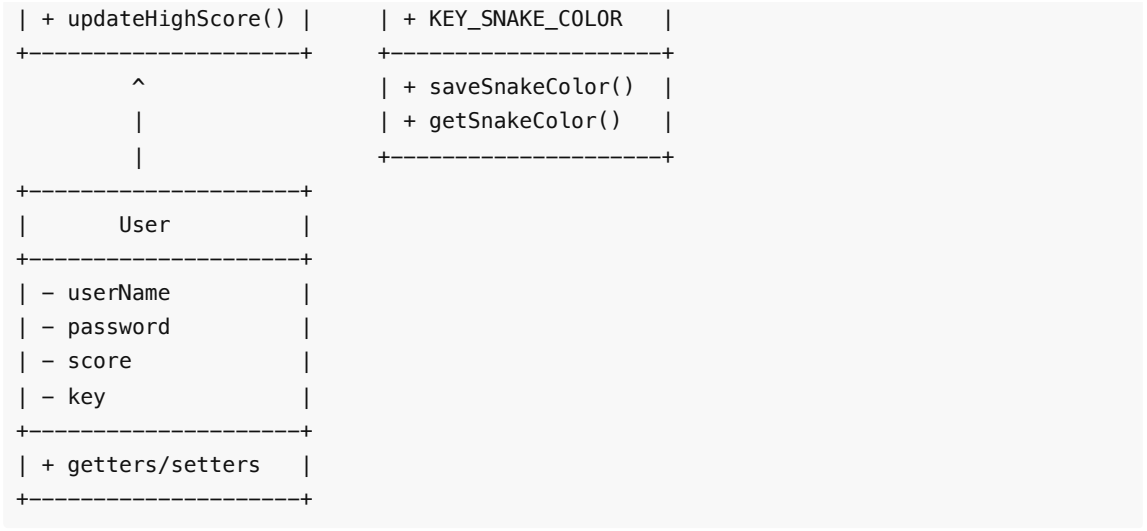
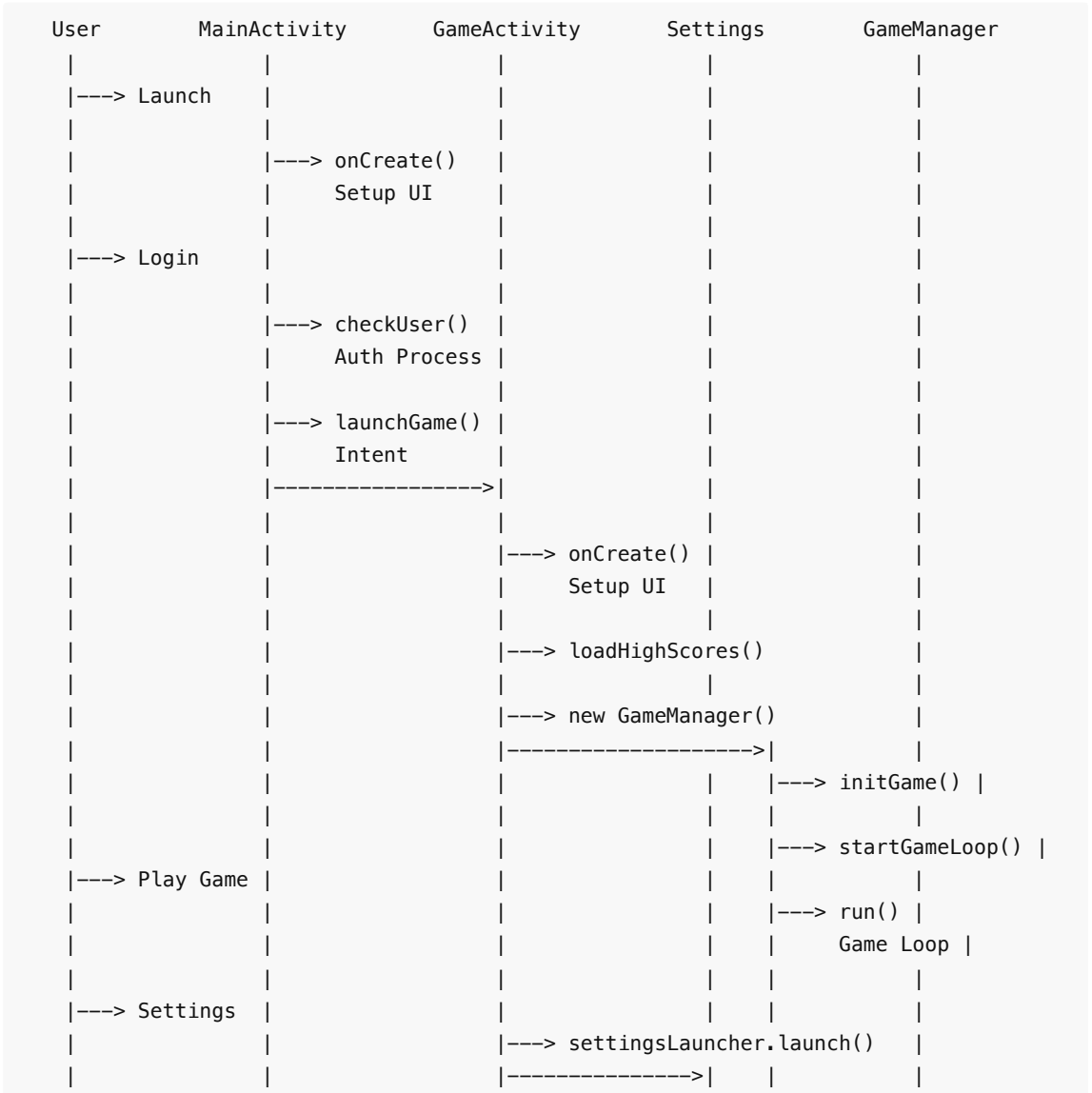
Snake Game UML Diagrams

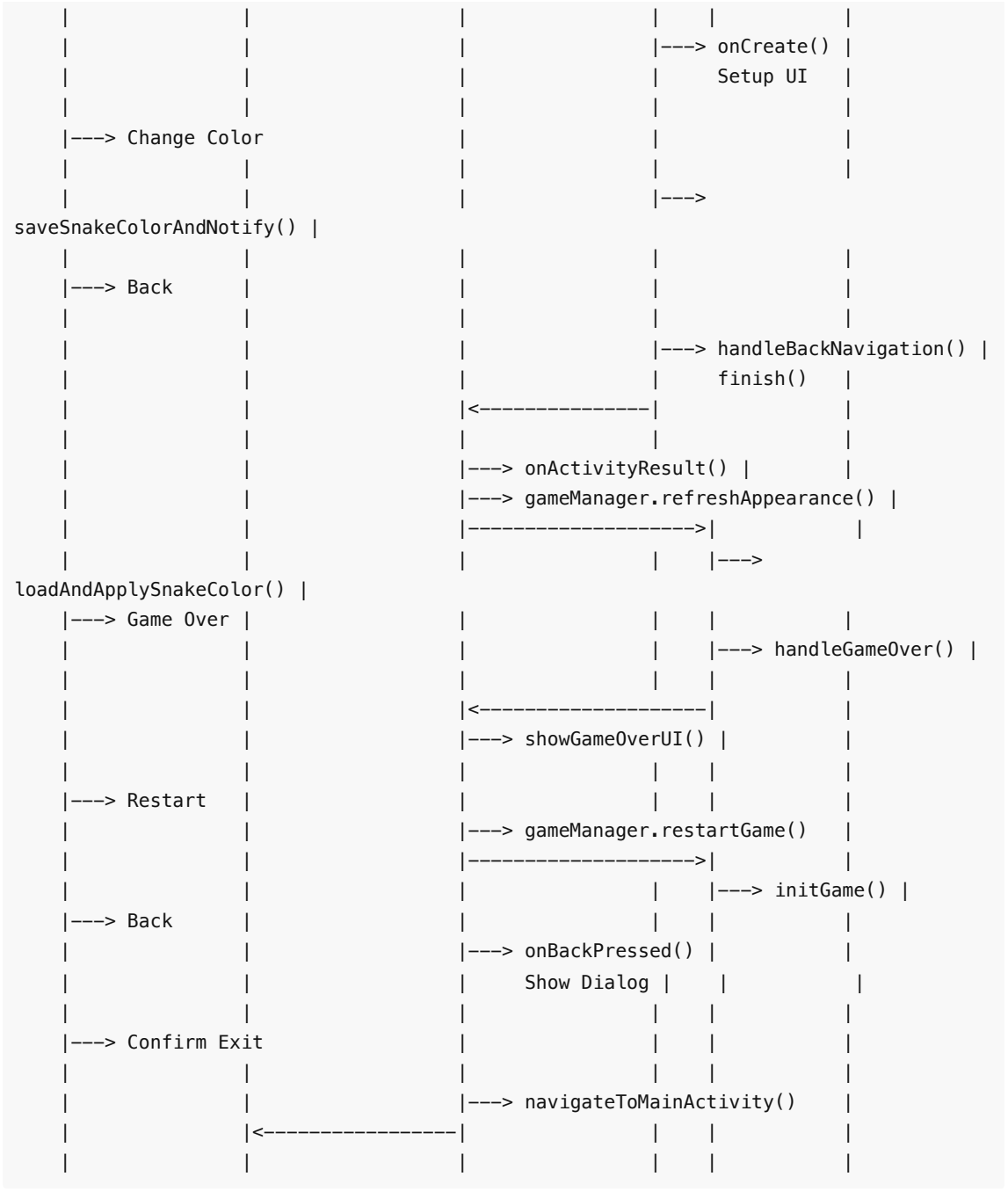
Class Diagram



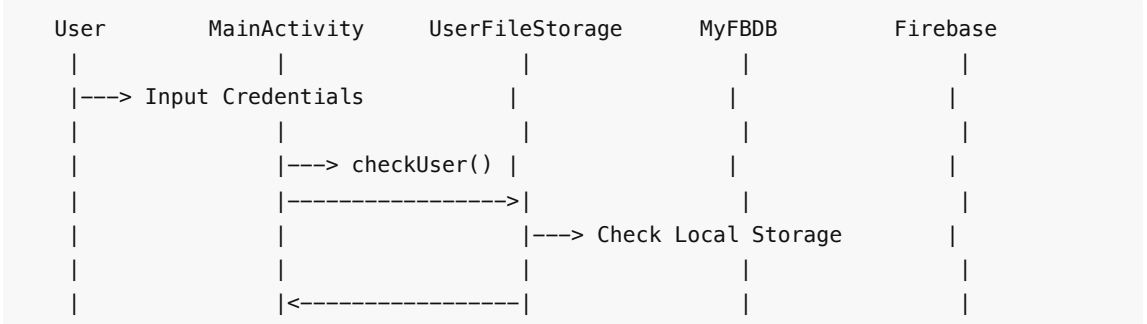


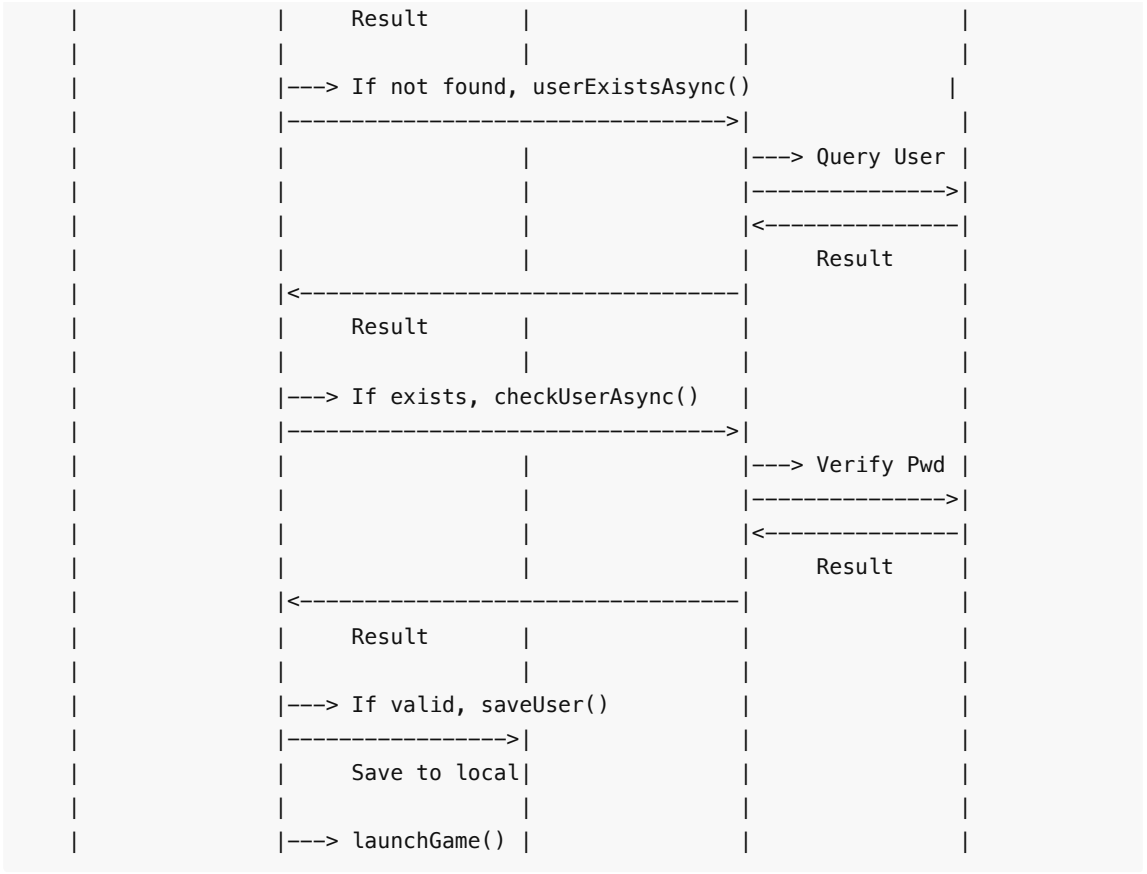
Activity Lifecycle Sequence Diagram



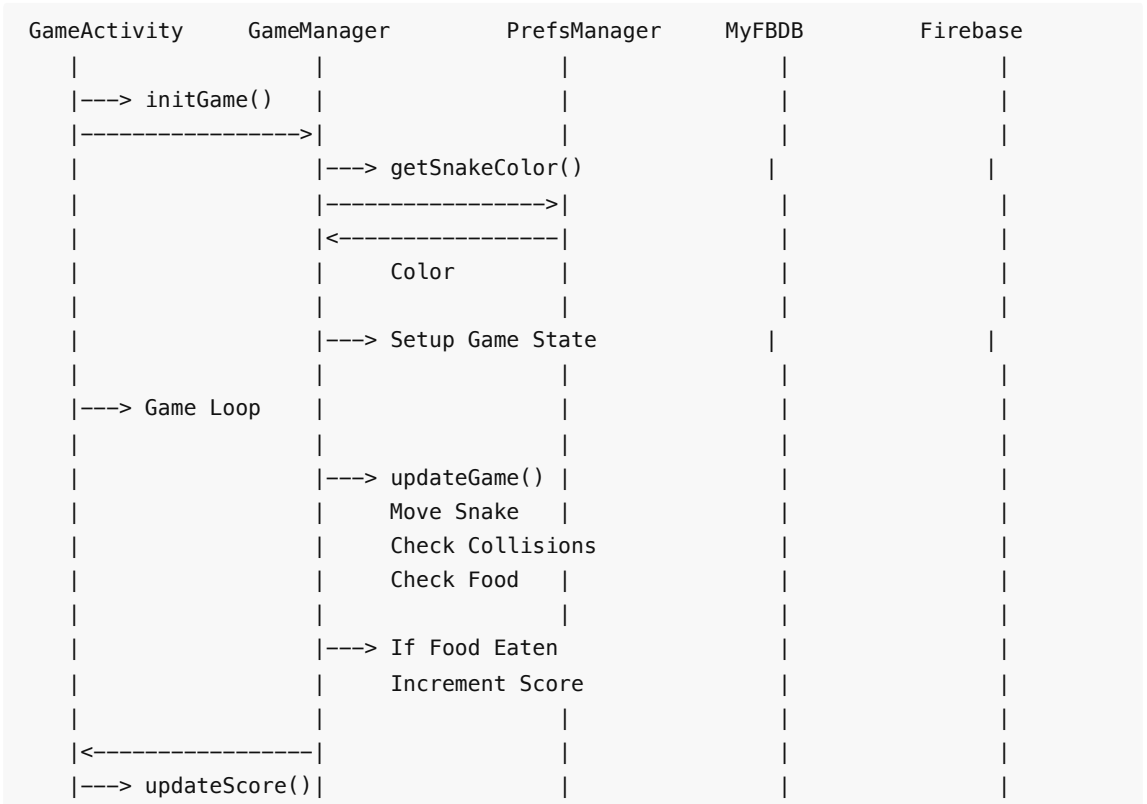


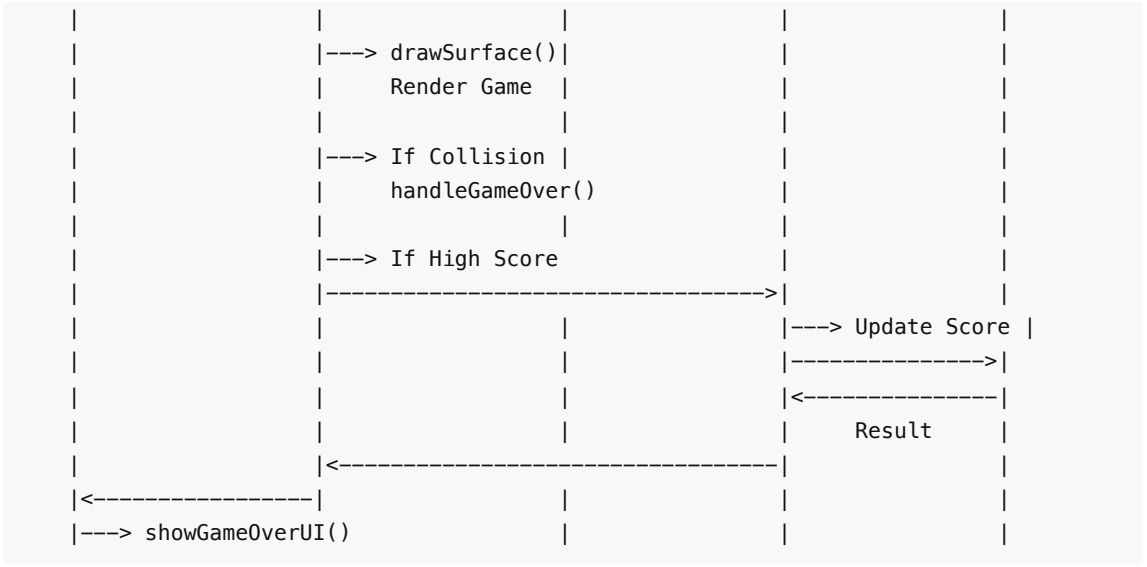
Authentication Sequence Diagram



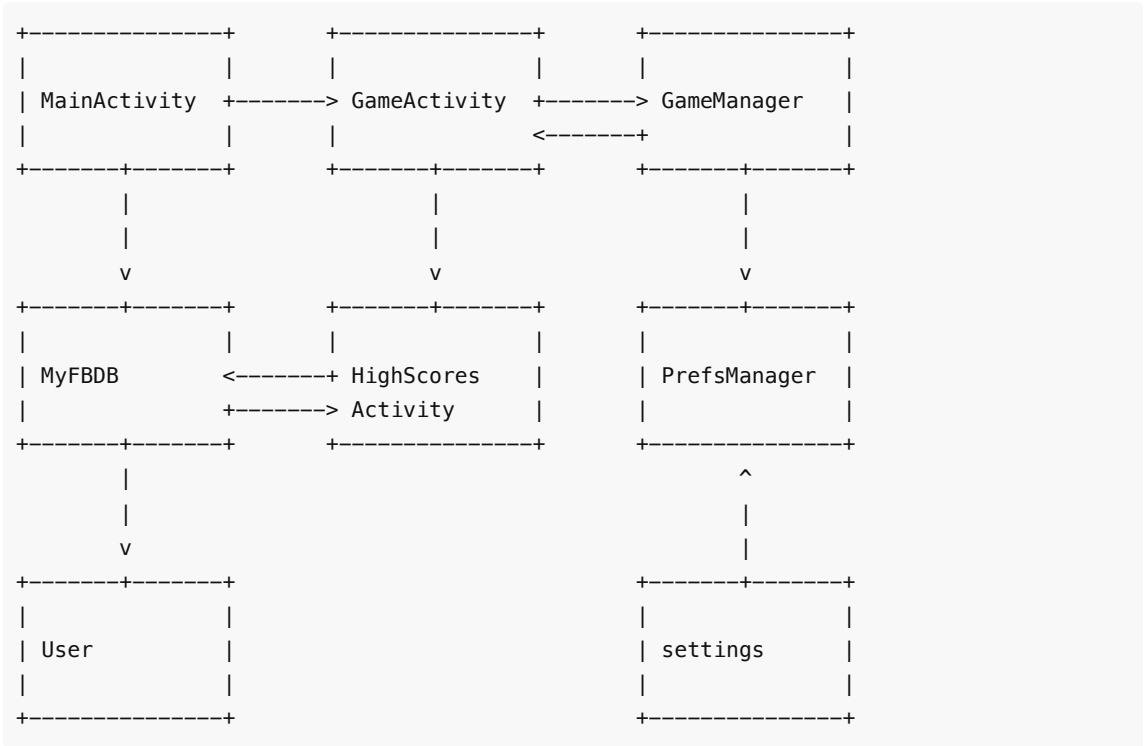


Game Logic Sequence Diagram





Component Dependencies Diagram



Notes on UML Diagram Usage

The UML diagrams above provide a comprehensive view of the Snake Game application's architecture:

1. **Class Diagram**: Shows the main classes, their attributes, methods, and relationships.
2. **Activity Lifecycle Sequence Diagram**: Illustrates the flow of activity transitions and how they interact during the app's lifecycle, from launch to game over scenarios.

3. **Authentication Sequence Diagram**: Details the authentication process, showing how credentials are verified against local storage and Firebase.
4. **Game Logic Sequence Diagram**: Focuses on the main game loop, collision detection, scoring, and interaction with Firebase for high score updates.
5. **Component Dependencies Diagram**: Provides a high-level overview of how different components in the application depend on each other.

These diagrams can be used for:

- Onboarding new developers to understand the application structure
- Planning future enhancements by understanding current component relationships
- Identifying potential areas for refactoring or optimization
- Documenting the implemented architecture for future reference