



# HexaLands Game GUI Documentation

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### 1. Introduction

This document serves as a comprehensive guide to the graphical user interface (GUI) of the HexaLands. It provides an in-depth look at the layout, design elements, and interactions within the app, ensuring users and developers alike can navigate and understand its functionality with ease.

## **2. Overview of the GUI**

This section aims to explain the flow of the application by listing clear steps.

### **2.1. Home Screen**

The home screen of the game contains buttons that route to the following pages `Register`, `Login`, `Leaderboard`, `Forgot Password`, and `Game Rules`. After a successful login, buttons `Register`, `Login`, and `Forgot Password` disappear. Additionally, `Play` and `Logout` buttons are displayed after the login.

### **2.2. Account & Sign**

#### **2.2.1. Register**

In order to play the game, you need an account. You can sign up to the application by pressing the `Register` button located on the home screen. After pressing the button, you will be routed to the register page. You need to fill in 3 fields to register successfully; `E-mail`, `Username`, and `Password`. After a successful registration, you will be routed to the login page.

#### **2.2.2. Login**

If you have an existing account you can route to the Login Page by pressing the `Login` button located on the home screen. From here you can authenticate properly to play the game. In order to authenticate you need to enter the correct `username` & `password` to the corresponding text fields.

#### **2.2.3. Forgot Password**

In case you forgot your password, you can follow these steps to reset your password:

1. Click the `Forgot Password` button to navigate to the forgot password page.
2. In here, you need to enter your account's valid e-mail to receive a reset password token. If the e-mail is valid, you will be automatically forwarded to the `Reset Password` page.
3. You can reset your password by filling `Password`, `Confirm Password`, and `Reset Token` fields. Additionally, you can press the `Resend Email` button to go back to the `Forgot Password` page and enter a new/another email.

## 2.3. Gameplay

The core of HexaLands centers around strategic gameplay that encourages resource management, trading, and building. The game unfolds on a board comprising hexagonal tiles, each representing resources that players collect to build roads, settlements, and cities to earn victory points.

### 2.3.1. Starting a Game

Upon logging in, players can start a new game by clicking the Play button. This action transitions the screen to the game board, where players begin their journey in HexaLands.

### 2.3.2. Game Board Overview

The central feature of HexaLands is the game board, a dynamic grid of hexes representing different resources. The board includes:

- **Resource Tiles:** Represent various resources like brick, wood, wheat, ore, and sheep
- **Tile Numbers (2-12):** Each tile has a number indicating the dice roll needed to harvest that resource.
- **Probability Dots:** The dots under the numbers illustrate the likelihood of each number being rolled, with more dots indicating a higher probability. This is based on the statistical frequency of rolling that number with two six-sided dice.

### 2.3.3. Initial Placement

Players start by getting one random settlement and one random road starting from the settlement. This initial placement is crucial as it determines the resources you'll collect throughout the game. Since the initial placement is random, players also receive additional 3 lumber, 3 brick, 1 grain and 1 wool not to get stuck at the beginning of the game. From this point, you can start to strategize and create plans for your expansion.

#### 2.3.4. Turn Sequence

Each player's turn consists of the following phases:

1. **Roll Dice:** Click `Roll Dice` to determine which resource tiles produce resources. Tiles with a number matching the dice roll give resources to adjacent settlements and cities.
2. **Build:** Use resources to build roads, settlements, or upgrade settlements to cities using the corresponding buttons on the GUI. Each new settlement or city increases your resource production and victory points.
3. **End Turn:** After completing actions, click End Turn to pass gameplay to the next player

#### 2.3.5. Player Dashboard

The right-hand side of the screen displays the player dashboard. Here, players can see their current resource cards and action buttons such as `End Turn` and `Roll Dice`. The dashboard also indicates the number of victory points and resource cards each player has.

#### 2.3.6. Winning the Game

You need to accumulate 8 victory points to win the game. You can achieve victory points by building settlements and cities. Also, holding the Longest Road gives you an extra 2 victory points. Victory points are tallied in the dashboard, and the game concludes when a player reaches the 8 victory points.

After a player wins the game, you can choose between playing again or returning home by pressing the buttons on the winner screen.

#### 2.3.7. Help & Game Rules

For assistance during gameplay, click the `HELP` button in the top-left corner. This section provides detailed information on building costs and rules for features.

## **2.4. Leaderboard**

To view player rankings, select the `Leaderboard` button from the home screen. This page displays players' scores and ranks. You can filter scores by different time periods—`WEEKLY`, `MONTHLY`, or `ALL-TIME`—by clicking on the corresponding tabs at the top of the page. Each tab presents a list of users with their scores for the selected time frame, sorted from highest to lowest.

## **Screenshots**



























