

# Django Golf Simulator Documentation

## Overview

The Django Golf Simulator is a web application designed to simulate golf shots based on user input. Users can register, log in, and create golf shot simulations using various clubs, distances, and environmental factors. Key features include user authentication, CRUD operations for shots, and a streamlined interface for viewing results.

## Installation Instructions

1. **Install Python**: Ensure Python 3.x is installed on your system.
2. **Set Up a Virtual Environment**:

```
``bash
python -m venv venv
source venv/bin/activate # On Windows, use venv\Scripts\activate
``
```
3. **Install Dependencies**:  
Navigate to the project folder and run:

```
``bash
pip install -r requirements.txt
``
```
4. **Apply Migrations**:  
Set up the database with:

```
``bash
python manage.py migrate
``
```
5. **Run the Server**:  
Start the development server with:

```
``bash
python manage.py runserver
``
```
6. **Access the Application**: Open your browser and go to `http://127.0.0.1:8000`.

## User Guide

1. **Registration and Login**:
  - Navigate to the **Register** page to create an account.
  - Log in using your credentials to access the simulator.
2. **Simulate Shots**:
  - Select a club, input distance, and provide any additional details.
  - Submit the form to see the simulated results.

3. **Manage Shots**:

- View a list of your simulated shots.
- Update or delete existing shots as needed.

4. **Log Out**:

- Use the **Logout** option in the navigation menu to sign out.

## Known Issues

1. **Port Conflict**:

- If the default port (8000) is already in use, start the server on a different port:

```
```bash
python manage.py runserver 8080
```
```

2. **Browser Compatibility**:

- Some features may render inconsistently on older browser versions. Use the latest version of Chrome or Firefox.

3. **Missing Features**:

- Advanced environmental factors (e.g., wind, terrain) are placeholders and not fully functional.