**ABSTRACT**

The implementation of a cricket simulation using computer graphics. We use OpenGL to recreate a scenario on a cricket pitch from the ball being bowled, the batsman striking the ball and the result of the delivery. We try to recreate all the real world scenarios and circumstances and all possible results.

**INTRODUCTION**

The game of cricket is one spanning many decades and is a matter of pride and joy to our nation. It involves 11 players from each team (2 teams per match) battling it out on a circular/oval ground. The rules are as follows:

-One team is the bowling is bowling side while the other bats. This is decided by means of a coin toss.

-The batting team has 2 batsmen on the field at a time while the fielding team has 11 players which include 1 bowler ,1 wicketkeeper and 9 fielders.

-The bowling team attempts to dismiss all batsmen while the batting team must chase down the target set by the bowling team

In this project we attempt to display this beautiful game and its components using OpenGL. In this demonstration we will focus more on the batting side of events and the scenarios that occur from their viewpoint. The possible events that can occur in a single delivery are:

1. Six - A ball is considered to be hit for a six if it crosses the boundary line of the field without bouncing anywhere on the ground I.e. it must directly leave the field of play after coming into contact with the bat of the batsman
2. Four - A four or boundary is said to be scored if the ball crosses the boundary line after bouncing one or more times after coming into contact with the ball
3. 1’s,2’s and 3’s - This is scored when the batsman after hitting the ball manage to run from one end of the pitch to the other and the number of runs is equal to the number of times they traverse the entire length of the pitch.

**CONCLUSION**

We have successfully implemented Cricket Simulation using OpenGL. We have also added quite a few animations relating to Cricket. Using this project we have demonstrated the various parts that are involved in a game of Cricket. We have implemented animation that can be helpful for a new learner to quickly learn the basics of the game in a short amount of time.

**RESULTS**

In this project we have a set of animations or screens that are implemented. The below is the list of all of them.

1. Home Screen:

This shows the name of our project, it also shows the names of the various team members.

1. Stadium Screen:

This shows the batsman as well as the bowler are standing at the respective positions. It also shows the stadium behind with the crowd cheering. We have also implemented flood lights and the scoreboard as well.

1. Animation for hitting a 6.

Once the user clicks on the number 6 on the keyboard, the following animation is shown on the screen. Firstly the bowler bowls and the then the batsman hits it for a six.

1. Animation for hitting a 4.

Once the user clicks on the number 4 on the keyboard, the following animation is shown on the screen. Firstly the bowler bowls and the then the batsman hits it for a four.