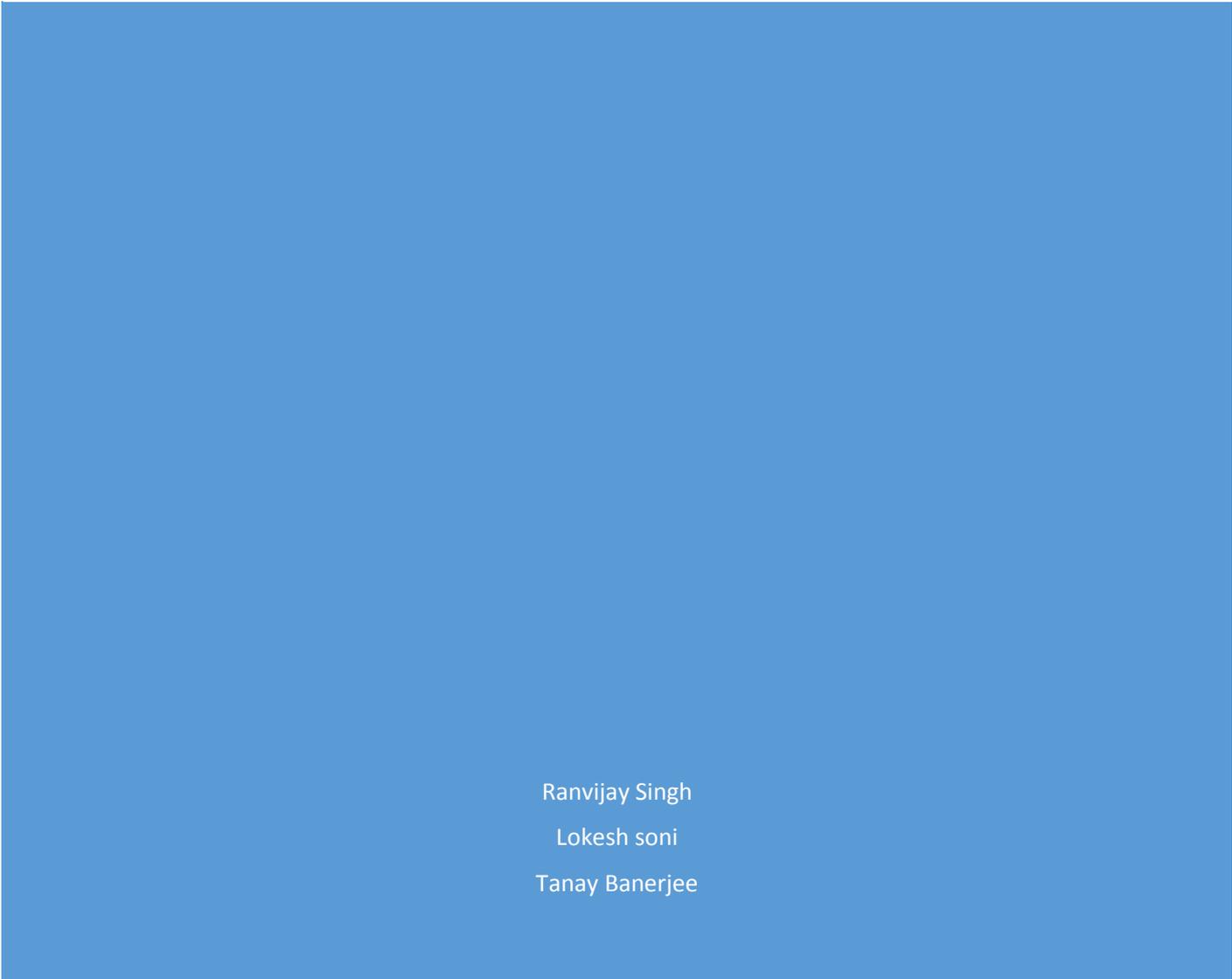




PROJECT REPORT

CHAIN REACTION



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Acknowledgement:

I would like to express my special thanks of gratitude to my teacher Prof. Deepak Phathak & Prof. Supratik Chakraborty as well as our lab TA Prakhar Gupta who gave us the golden opportunity to do this wonderful project on the topic (Chain Reaction), which also helped us in doing a lot of Research and we came to know about so many new things, I am really thankful to them.

Introduction [\(REF. GOOGLE\)](#):

One of the most popular ways of recreation in today's digital world is computer games. It's one of those things given to us by the computer, which is praised and enjoyed by billions around the globe. With these thoughts in our mind we decided to use our newly acquired programming knowledge to create the famous computer game "Chain Reaction"- a game which has about 89,10,000 results (0.31 seconds) on the google website and is a regular feature of Google play store .

Problem Statement:

To create a replica of the Chain reaction game provided by various websites and Google play store. We are using the knowledge bestowed onto us in the CS101 course, You tube videos and also with the help of some of the websites.

About The Game [\(REF. GOOGLE PLAYSTORE\)](#):

This game is a popular multiplayer strategy game .The objective of Chain Reaction is to take control of the board by eliminating your opponents' atoms.

Players take it in turns to place their atoms in a cell. Once a cell has reached critical mass the molecule explode into the surrounding cells adding an extra atoms and claiming the cell for the player. A player may only place their atoms in a blank cell or a cell that contains atoms of their own colour. As soon as a player loses all their atoms they are out of the game.

Basic Implementation (How to play the game) :

- Welcome to the beautiful game
- As you enter the game you are required to enter the number of players you want, size of grid to play on and keyboard or mouse input options.
- The game also provides a lifeline option in the keyboard play option i.e. you can explode at any empty cell after all the players have played at least twice subject to number of lifelines restricted to 1.
- Using the input device you can place atoms in the grid where ever you like.
- The critical masses of the corners are 1, borders are 2, and the rest of the grid is 3.
- Once after the first round of play whenever atoms referring to a player become zero in the grid the player is eliminated from the play.
- If only atoms referring to a single player is remaining in the grid a gameover screen is displayed with the id of the player whose atoms were remaining in the grid.



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