

INTRODUCTION TO SCRATCH

SCRATCH GAMES ARE VISUALLY FUN AND INTERACTIVE WAYS OF LEARNING CODING AND GAME DEVELOPMENT.

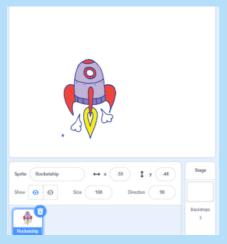
SCRATCH USES A BLOCK-BASED PROGRAMMING INTERFACE, WHERE USERS CAN DRAG AND DROP GRAPHICAL BLOCKS TO CREATE SCRIPTS. THESE BLOCKS REPRESENT CODE AND ARE DESIGNED TO BE INTUITIVE AND EASY TO USE, ESPECIALLY FOR CHILDREN AND BEGINNERS.

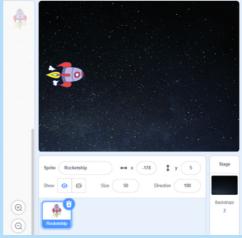
MY TAKE ON SCRATCH

I TRIED MAKING A ROCK BLASTER GAME.
A ROCK BLASTER GAME IS A GAME WHERE
YOU [THE PLAYER] CONTROL THE ROCKETSHIP
AND FIRE THE LASER TO BLAST THE SPACE
ROCK. ABOVE, YOU CAN SEE A ROCKETSHIP
SHOOTING A LASER, AND IF THE LASER
TOUCHES THE ROCK, THE ROCK BLASTS, AND
THE SCORE WILL INCREASE BY 100. USING THE
UP AND DOWN ARROW KEYS, YOU CAN
CONTROL THE DIRECTION OF THE
ROCKETSHIP IN THE UP AND DOWN ORDER.

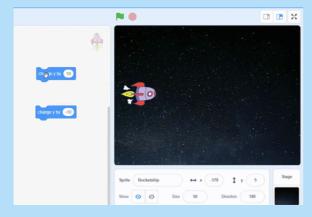
THIS IS THE APPROACH I TOOK TO DEVELOP THIS GAME

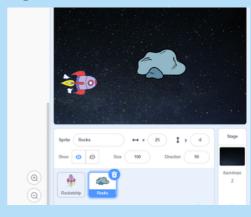
PICK THE SPRITE [ROCKETSHIP]



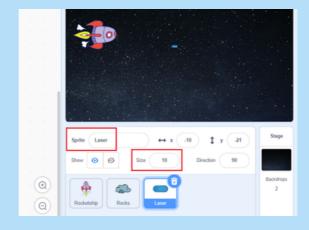


CONTROL THE SPRITE [WITH UP AND DOWN ARROW KEYS]





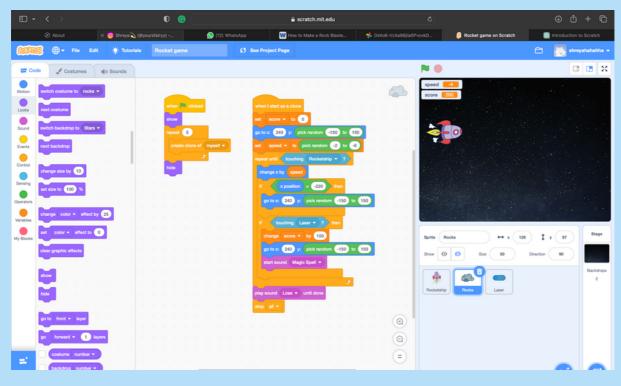
ADD THE ENEMIES [ROCKS]



SHOOT THE LASER [SPRITE]



CODING



```
when I start as a clone

go to x: (-160) y: y position v of Rocketship v

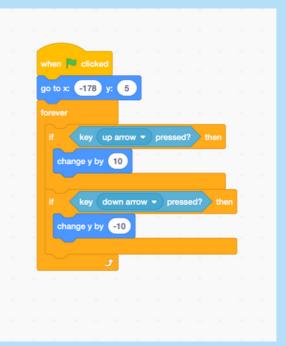
show

repeat until touching edge v ? I

move 10 steps

delete this clone

when space v key pressed create clone of myself v
```



THIS IS SOME SCREENSHOTS FROM THE PROCESS

HARDWARE







THIS IS SOME SCREENSHOTS FROM THE PROCESS FOR THE HARDWARE COMPONENT I USED MAKEY MAKEY ALONG WITH A PIECE OF CARDBOARD AND A BROKEN SAFETY PIN

I TOOK A SUSTAINABLE APPROACH ON THIS AND MADE A JOYSTICK OUT OF IT.

THIS JOYSTICK COULD ROTATE 360 DEGREE
BUT SINCE MY GAME REQUIRED ONLY UP
AND DOWN CONTROLS I RESTRICTED THE
MOVEMENT TO 180 DEGREE SO AS TO
REMOVE CONFUSION.

I ALSO ADDED A CONTROL FOR SPACE KEY
THROUGH WHICH ROCKET FIRES LASER
BEAMS.

LINK TO VIDEOS-

https://youtube.com/shorts/_louivLLCz0 https://youtube.com/shorts/pORHmUyVjXA

THIS IS SOME VIDEOS FROM THE PROCESS



LINK TO GAME

https://scratch.mit.edu/projects/835274690

LEARNINGS

I STARTED WITH LEARNING BASICS WHICH LEAD ME TO EXPERIMEMT WITH SCRATCH. I FOLLOWED FEW TUTORIALS WHICH HELPED ME BUILD SMALL PROJECTS WHICH ULTIMATELY RESULTED IN THIS GAME.

> SUBMITTED TO-PROF. JAY DHARIWAL

