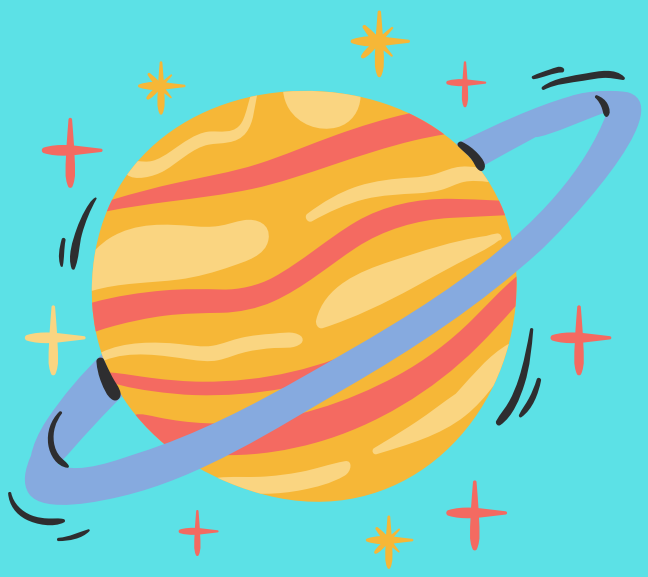
INTRODUCTION TO INTERACTIVE MEDIA

STARSHIP GO DOCUMENTATION

FINAL MIDTERM



SYED FAHAD RIZWAN

BACKSTORY

Princess Lyva's 8-year old daughter, the last descendant of royal blood, has been abducted by aliens from planet Zolo and she must maneuver past Zolo's fatal landscapes in her spaceship **to secure humanity's future.**

I was **artistically inclined** to illustrate the backstory through images instead and sound instead of text & therefore paired **9 photoshop images** with minimal text and a dramatic background music to form a **personal connection** and **increase the stakes,** giving the simple premise of a maze game a **greater purpose.**

Illustrations are attached **below.**

DOCUMENTATION

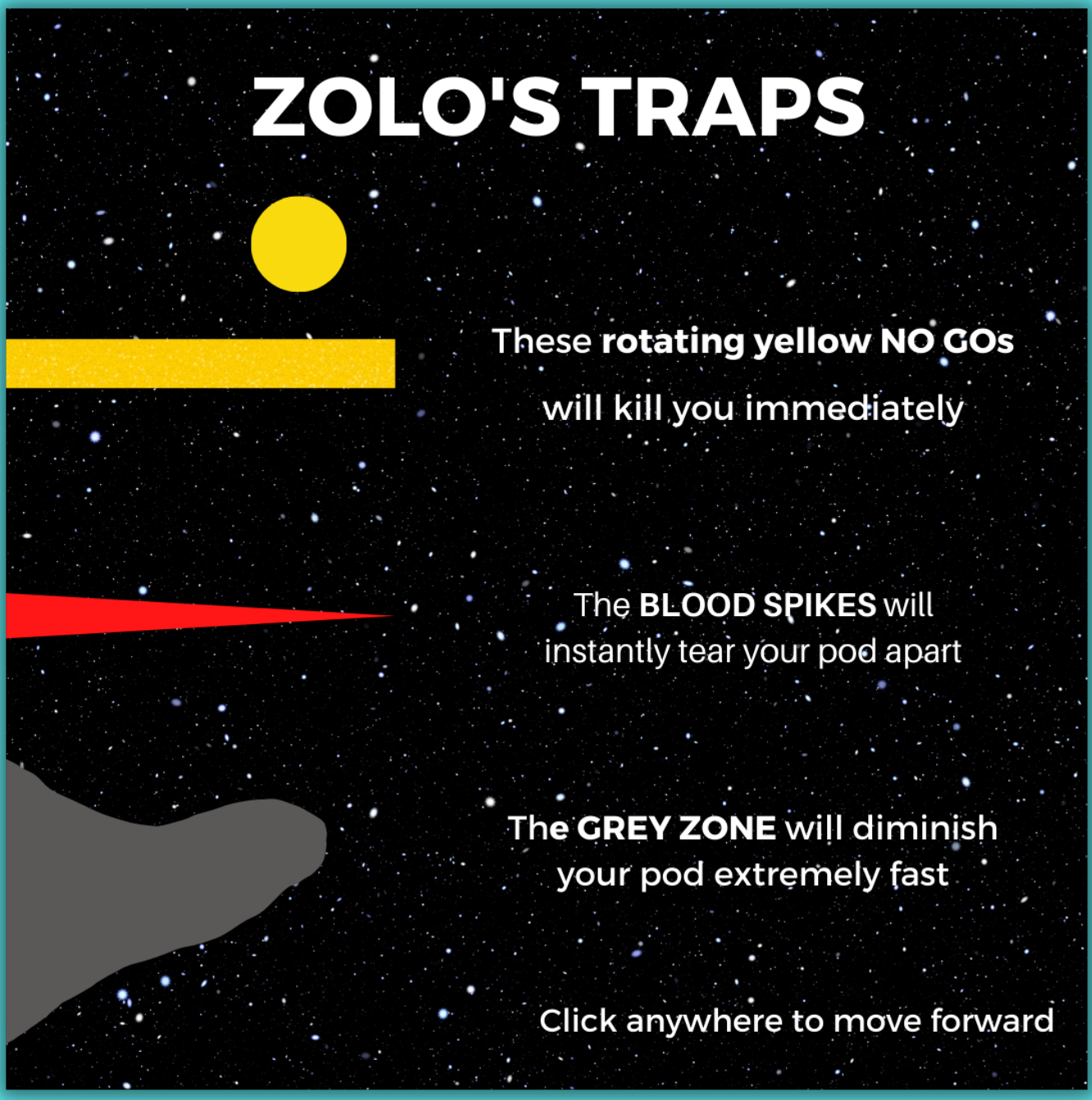
CANVAS 1200 X 1200

DOCUMENTATION

INSTRUCTIONS

DOCUMENTATION

INSTRUCTIONS



DOCUMENTATION

INSTRUCTIONS

DOCUMENTATION

BACKSTORY

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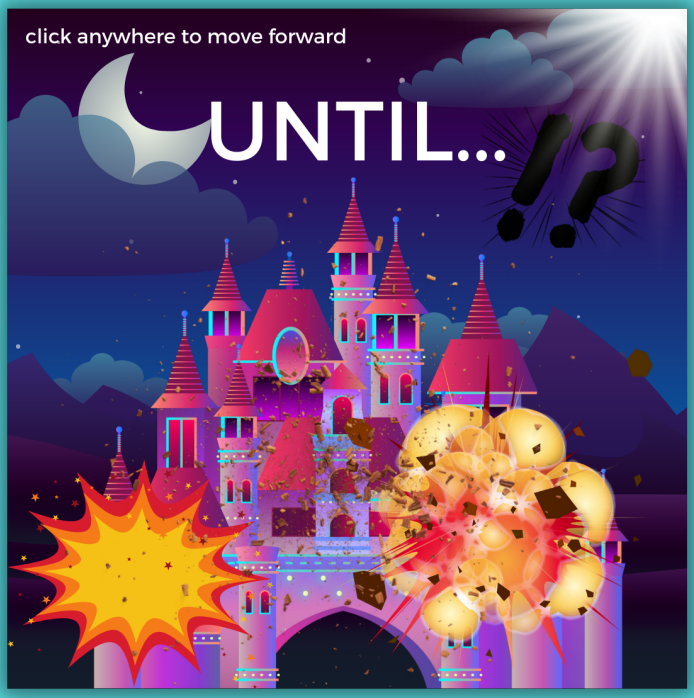
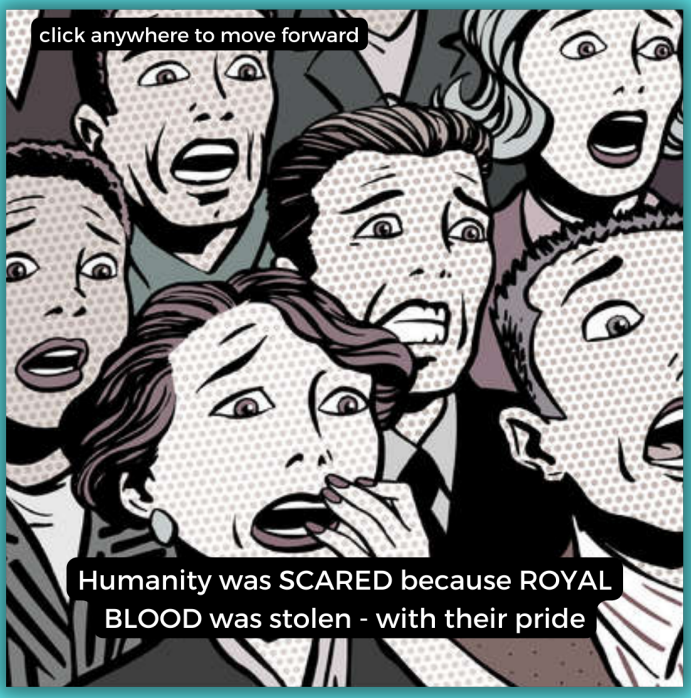
BACKSTORY





DOCUMENTATION

BACKSTORY

DOCUMENTATION

PROCESS

01

I designed this simple maze via photoshop, and **did not use** grids as they limited my artistic boundaries. While harder, it was undoubtedly worthwhile.

02

I created **monochromatic** spikes, rotating obstacles, and walls to make detection easy via **image.get,** comparing the pixel value of my ship with that of the background.

03

I used a **curved rectangle** as princess Lyva's spacepod, making it easier to define pixel value ranges compared to something non-linear.

04

The background image is in the **draw function** to avoid trails once the white sphere moves on screen to move past in the maze.

05

The mousepressed() function is extremely useful, incrementing my **mode++** upon each click and moving the game and story forward.

PRELOAD

```
// loading all assets
function preload() {
  maze = loadImage("Assets/maze_final.png");
  font = loadFont("Assets/Starjout.ttf");
  font2 = loadFont("Assets/Roboto-Medium.ttf");
  score = loadSound("Assets/score.mp3");
  instruction1 = loadImage("Assets/Instruction_1.png");
  instruction2 = loadImage("Assets/Instruction_2.png");
  instruction3 = loadImage("Assets/Final_Instructions.png");
  story1 = loadImage("Assets/Story 1.0.png");
  story2 = loadImage("Assets/Story 2.0.png");
  story3 = loadImage("Assets/Story 3.0.png");
  story4 = loadImage("Assets/Story 4.0.png");
  story5 = loadImage("Assets/Story 5.0.png");
  story6 = loadImage("Assets/Story 6.0 (1).png");
  story7 = loadImage("Assets/Story 7.0.png");
  story8 = loadImage("Assets/Story 8.0.png");
  story9 = loadImage("Assets/Story 9.0 (1).png");
  humanWin = loadImage("Assets/humanWinX.png");
  humanLost = loadImage("Assets/Humanity_Destroyed.png");
  backstory = loadSound("Assets/backstory.mp3");
}
```

Storing **backstory images, soundtracks, and instructions** in the assets folder, I loaded them under the preload() function as I initialized my game so they are available wherever called

CLASS ELEMENTS

```
// spacepod formation class
class spaceship {
  constructor(xPos, yPos, color, width) {
    this.x = xPos;
    this.y = yPos;
    this.color = color;
    this.width = width;
  }

  // draws ship and initiates gravity
  drawShip() {
    noStroke();
    fill(255);
    this.color = rect(this.x, this.y, this.width, this.width, 10);
    this.y = this.y + 1;
  }

  // controls the ship
  moveShip() {
    if (keyCode == UP_ARROW) {
      this.y = this.y - 2.5;
    } else if (keyCode == DOWN_ARROW) {
      this.y = this.y + 2;
    } else if (keyCode == LEFT_ARROW) {
      this.x = this.x - 2;
    } else if (keyCode == RIGHT_ARROW) {
      this.x = this.x + 2;
    }
  }
```

Class formation, downward pull initiation, spaceship creation, and movement

DOCUMENTATION

CENTRAL SPINE

```
// detects healing pod using pixel value and increases health
increaseHealth() {
  let pixValShipCENTER = this.color.get(this.x, this.y);
  let pixValShipRT = this.color.get(
    this.x + this.width / 2,
    this.y - this.width / 2
  );
  let pixValShipRB = this.color.get(
    this.x + this.width / 2,
    this.y + this.width / 2
  );
  let pixValShipLT = this.color.get(
    this.x - this.width / 2,
    this.y - this.width / 2
  );
  let pixValShipLB = this.color.get(
    this.x - this.width / 2,
    this.y + this.width / 2
  );
  let healthPixValue = health_ellipse.get(360 * 2, 560 * 2);

  if (pixValShipRT[0] === healthPixValue[0]) {
    this.width = this.width + 1;
  } else if (pixValShipRB[0] === healthPixValue[0]) {
    this.width = this.width + 1;
  } else if (pixValShipLT[0] === healthPixValue[0]) {
    this.width = this.width + 1;
  } else if (pixValShipLB[0] === healthPixValue[0]) {
    this.width = this.width + 1;
  } else if (pixValShipCENTER[0] === healthPixValue[0]) {
    this.width = this.width + 1;
  }
}
```

This piece is the **core** of my game. I used the same concept for **wall detection, obstacle detection, and win and loss detection.** I essentially used pixel values at specific coordinates to make decisions. I didn't find any such examples online. Maybe we pioneered something unique here: innovation is brewing!

DOCUMENTATION

HOW TO WIN?

Maneuver the spaceship past the spiked walls and rotating monsters till you get to the end line

THINGS I LEARNT

I learnt that **keyIsDown()** function allows you to detect two keys at once, allowing greater control yet I chose not to use it as you constantly had to press the keys for the desired impact, seeming **counterintuitive** to me.

I learnt that **sounds** should never be put in the draw function as it repeats them, hence butchering them. I, therefore, used variables in the **mousepressed()** function to begin sounds **only once** before stopping them where ever I like.

I learnt that **pixelValue** via image.get is extremely useful. I also learnt that some concepts as a standalone topic might seem worthless but integrating them with other concepts can produce **beautiful results.**

CHALLENGES

Resetting **but** collating variables and resetting them to original value was quite helpful. I could not **reset pressed keys** but I used **keypressed()** to trigger reset upon pressing enter.

Adding sound. **Neither** in the classes or the draw function did it properly work. However, it's clear now. Repetitively calling them distorts and slows them.

Creating backstory art and finding the right songs - **not difficult just lengthy work** but worth it. My game will force the player to make decisive choices. It **is not easy.** On the contrary, it is **quite hard.** Therefore, it will force the player beyond their comfort zone, helping them grow and develop. This intent drove me past this daunting yet rewarding journey.

Determining how exactly to use **pixelvalue** and comparing it to a predetermined digit was tricky to figure out. However, it carried the whole project once I did.

Thank you so much for all the help! Looking forward to a more creative and impactful rest of the semester.