GAME DESIGN DOCUMENT

By Piyush Pallav & Akshay Bharadwaj

CONCEPT BRIEF

PLOT: Lets take care of a very hungry baby. Only when you feed the baby the right things, he/she will stop crying.

BRIEF: In this game, you control the spoon and collect food items while avoiding obstacles/harmful products to feed the hungry baby at the end of the track.

GENRE: Hyper casual game | **SUB GENRE:** Arcade (19% popularity in Feb 2023)

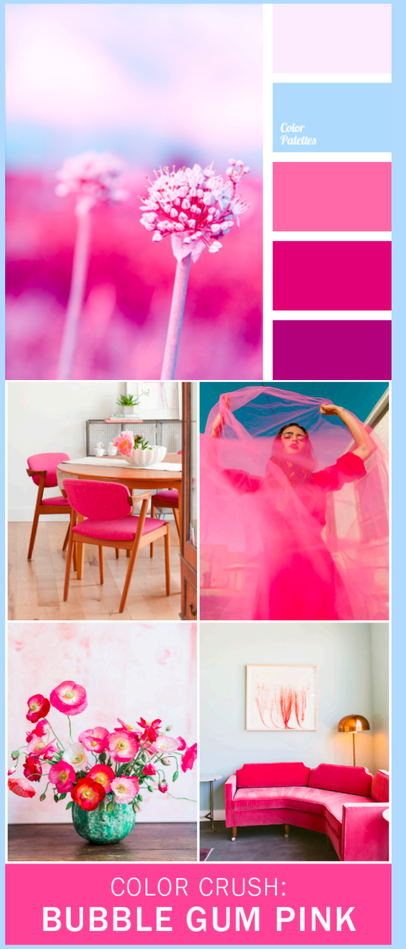
THEME: Food, balls, Toys, Kids

MECHANICS: LEFT and RIGHT flying mechanics; Scoring and collection mechanics; Physics mechanics for obstacles and the player character itself.

SCORING: Every collectible adds a point and every obstacle subtracts a points In the end depending on the score, the player gets a Star rating.

CONTROLS: LEFT and RIGHT movement using dragging controls (Most popular in Feb 2023).

ORIENTATION: Portrait view where camera is behind the character.



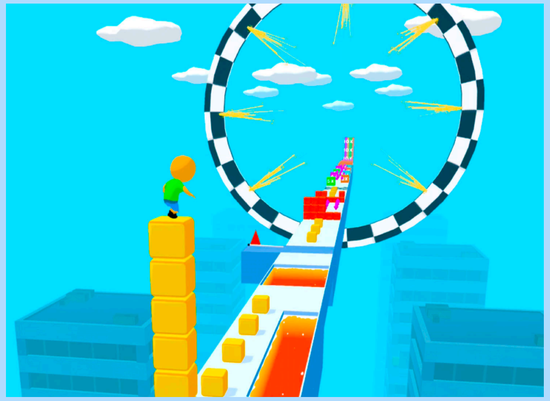
CONCEPT BRIEF

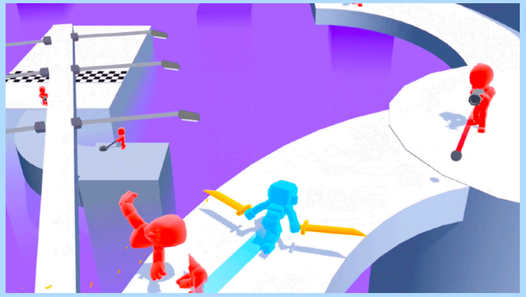
REFERENCE TREND: OPEN LINK

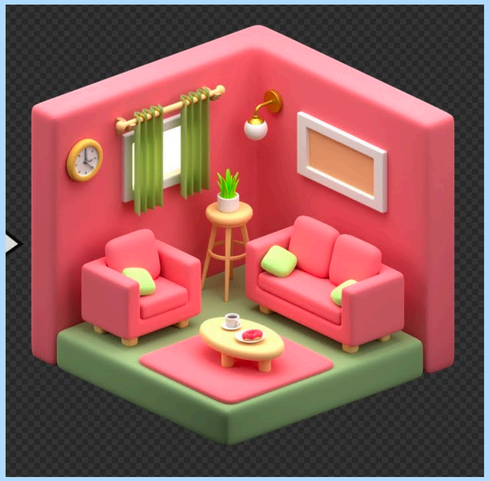
WOW MOMENTS: A sense of flying through various beautiful 3D levels; Effects on point collection, collision with obstacles and reaching the end.

LEVELS: Levels will be different rooms in the house like the bathroom, the baby's bedroom, kitchen, dining room, etc.

FUTURE FOCUS: Every room will have 5 stages with different layouts and increasing difficulty; New unlock-able outfits for the baby through in game purchase.

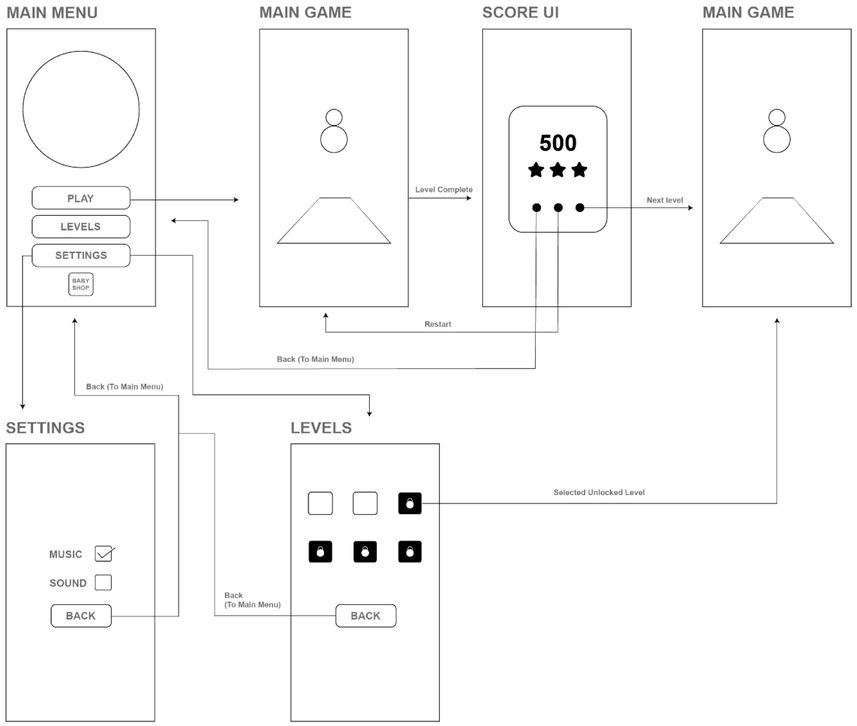






CONCEPT BRIEF

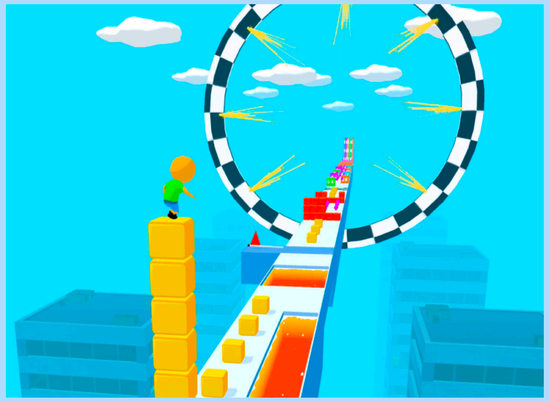
WIREFRAME: The basic wireframe of the game.

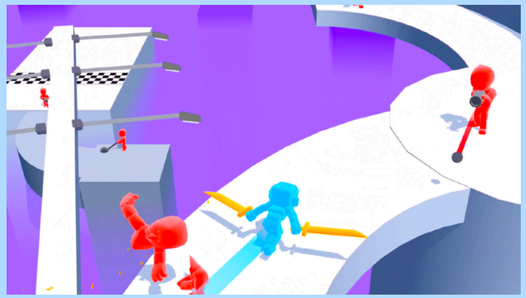


ASSET PREPARATION

ART BIBLE

Art style : The game aims for a vibrant and playful visual using simple 3D elements using basic 3D shapes that are very cute and comfy.





Font Family: The font which we chosen is **"Bubblebody"**. "The menus, UI, popups will use the same font. This font gives goes with the comfy and cute vibe of the game.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

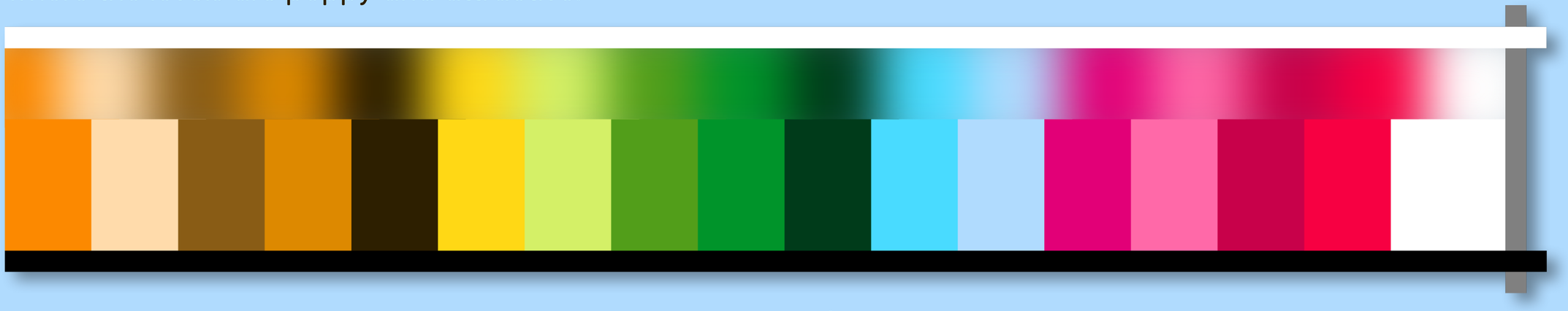
a b c d e f g h i j k l m n o p q r s t u v w x y z

1 2 3 4 5 6 7 8 9 0

ASSET PREPARATION

ART BIBLE

Colour Schemes: Our Eye catchy colour scheme is again using saturated colours where the levels are poppy and attractive.



Character Art: The baby is the cutest main character. He/she is made using 2D illustrations made on Illustrator which is then wrapped on 3D models (made on Maya).

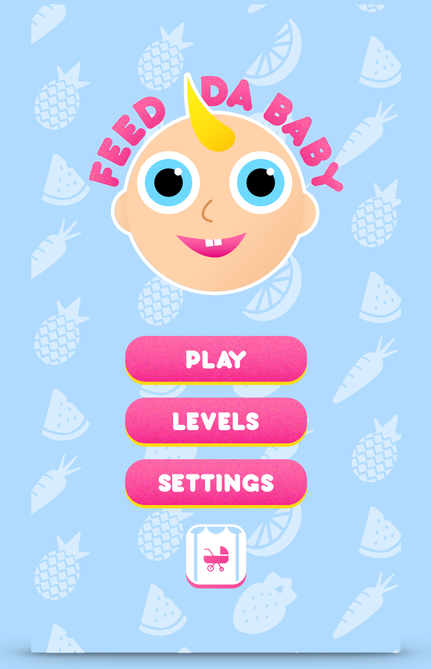
ASSET PREPARATION

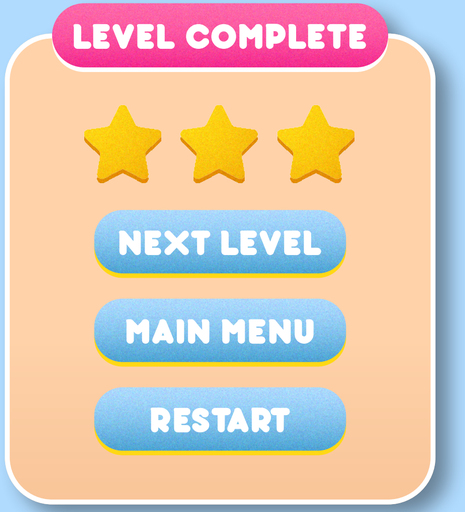
ART BIBLE

Environments and Camera View: The first person camera view is like holding something in front of your phones back camera and recording it. The environments are made of a background wall and floor and props to give a sense a depth to the player.

ASSET PREPARATION

UI & GUI: The UI is made of buttons and banners on panels for pops, and menu screens. Curved edges and vibrant colours give a very playful feel to the UI.

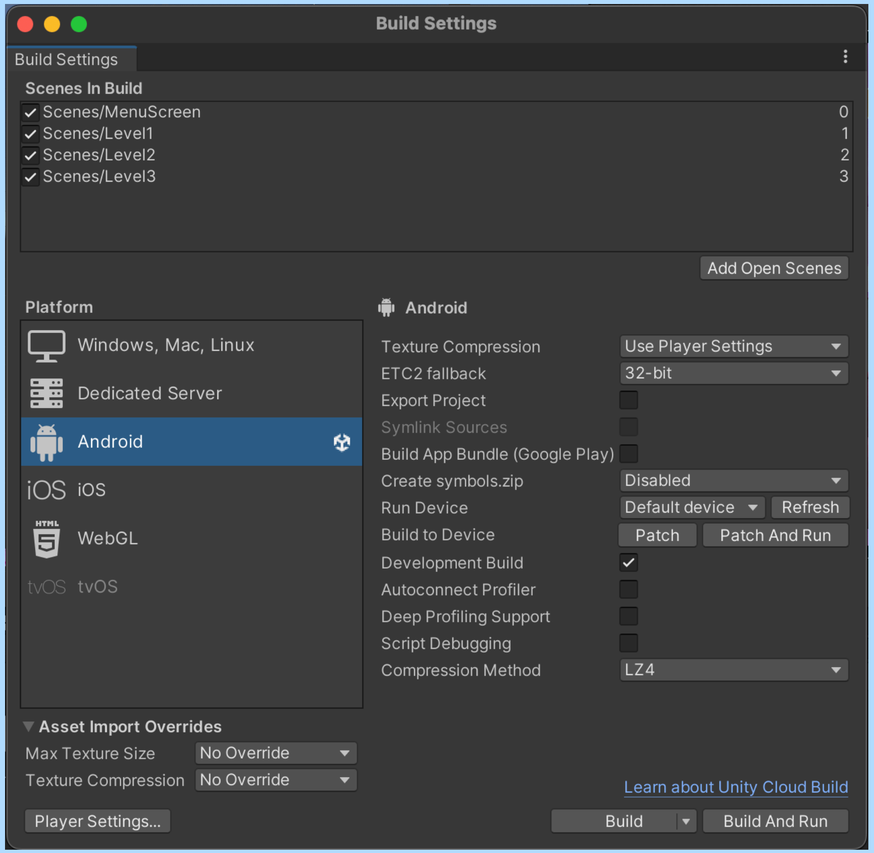




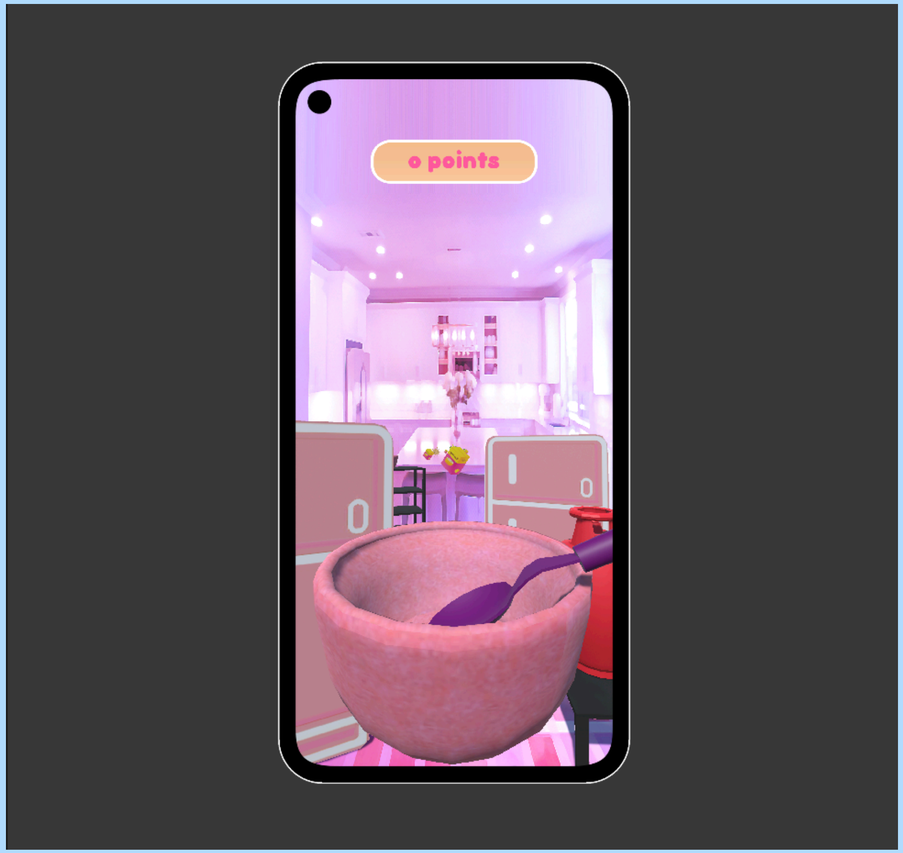
SOUND EFFECTS: There are 3 basic sound effects. Background music, Obstacle/ collectibles SFX, UI SFX.

INTEGRATION

BUILD SETTINGS: Basic Android Build Settings



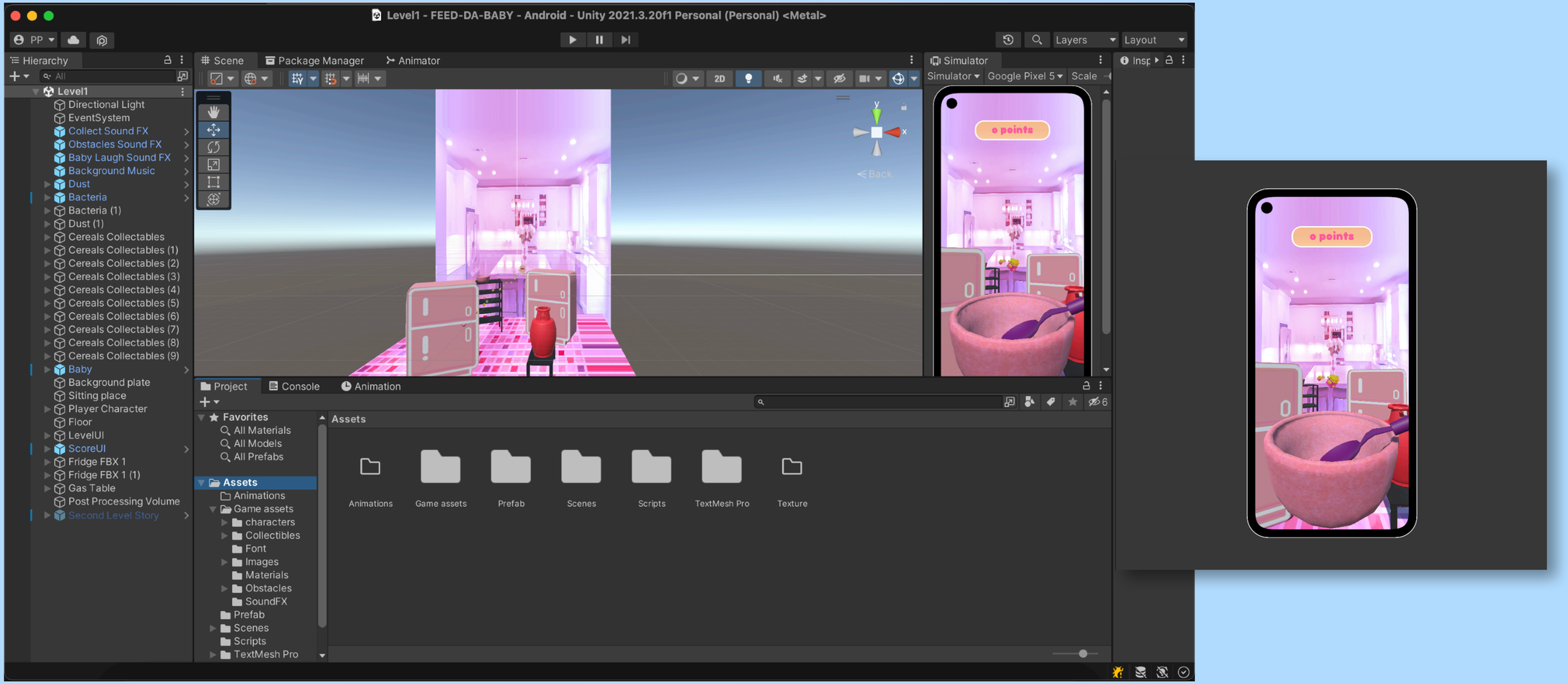
ORIENTATION: Portrait.



INTEGRATION

ASSET INTEGRATION: Added assets to the project.

CAMERA VIEW: First person.



INTEGRATION

PHYSICS & INPUT CONTROLS


```
public class PlayerMovement : MonoBehaviour
{
    [SerializeField]
    private float speed = 0.01f;
    private Touch touch;
    [SerializeField]
    private float movementSpeed;
    private float minX;
    private float maxX;



    // Update is called once per frame
    void Update()
    {

        if (Input.touchCount > 0)
        {
            touch = Input.GetTouch(0);

            if(touch.phase == TouchPhase.Moved)
            {
                transform.position = new Vector3(transform.position.x + touch.deltaPosition.x * speed,
                transform.position.y, transform.position.z);

                float newX = transform.position.x + touch.deltaPosition.x * speed;

                float clampedX = Mathf.Clamp(newX, -3.5f, 5.4f);
                transform.position = new Vector3(clampedX, transform.position.y, transform.position.z);
            }


        }
        transform.Translate(0, 0, 1 * movementSpeed * Time.deltaTime);

    }
}
```

INTEGRATION

PHYSICS & INPUT CONTROLS

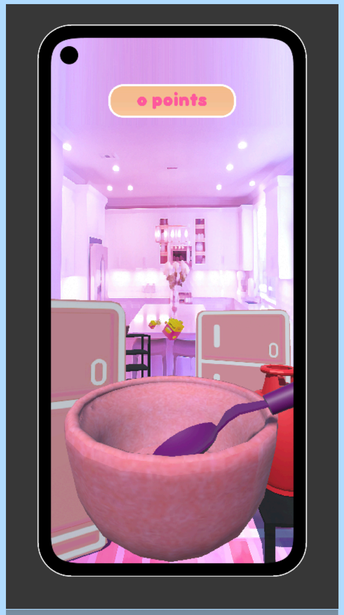
```
private void OnTriggerEnter(Collider collision)
{
    if (collision.gameObject.CompareTag("Items"))
    {
        collectiblesSfx.Play();
        Destroy(collision.gameObject);
        score++;
        scoreText.text = score.ToString() + " " + "points";

        if (score >= 1 && score <= 6)
        {
            starOne.SetActive(false);
            starTwo.SetActive(true);
            starThree.SetActive(false);
        }

        if (score > 6 && score <= 12)
        {
            starOne.SetActive(true);
            starTwo.SetActive(true);
            starThree.SetActive(false);
        }

        if (score > 12 && score <= 20)
        {
            starOne.SetActive(true);
            starTwo.SetActive(true);
            starThree.SetActive(true);
        }
    }

    if (collision.gameObject.CompareTag("Obstacle"))
    {
        obstaclesSfx.Play();
        Destroy(collision.gameObject);
        score--;
        scoreText.text = score.ToString() + " " + "points";
    }
```

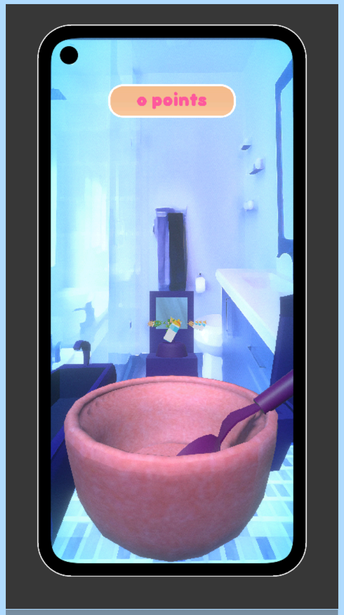
```
private void OnTriggerEnter(Collider collision)
{
    if (collision.gameObject.CompareTag("Items"))
    {
        collectiblesSfx.Play();
        Destroy(collision.gameObject);
        score++;
        scoreText.text = score.ToString() + " " + "points";

        if (score >= 1 && score <= 3)
        {
            starOne.SetActive(false);
            starTwo.SetActive(true);
            starThree.SetActive(false);
        }

        if (score > 3 && score <= 7)
        {
            starOne.SetActive(true);
            starTwo.SetActive(true);
            starThree.SetActive(false);
        }

        if (score > 7 && score <= 10)
        {
            starOne.SetActive(true);
            starTwo.SetActive(true);
            starThree.SetActive(true);
        }
    }

    if (collision.gameObject.CompareTag("Obstacle"))
    {
        obstaclesSfx.Play();
        Destroy(collision.gameObject);
        score--;
        scoreText.text = score.ToString() + " " + "points";
    }

    if (collision.gameObject.CompareTag("Child"))
    {
        babyGiggle.Play();
        Destroy(collision.gameObject);
        backgroundMusicfx.Stop();
    }
}
```

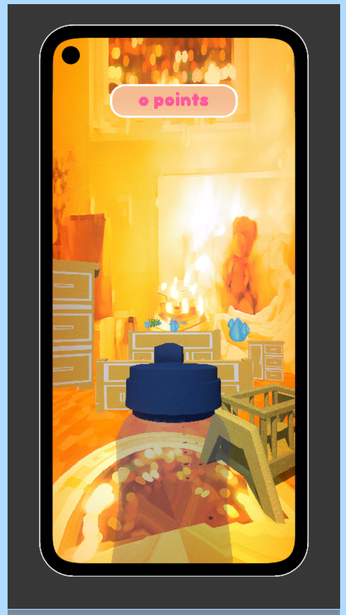
PROTOTYPE

To check the prototype gameplay, CLICK HERE!

LEVELS: There are total of 6 levels(3 still in Dev. Phase). Each







Dev.ph.

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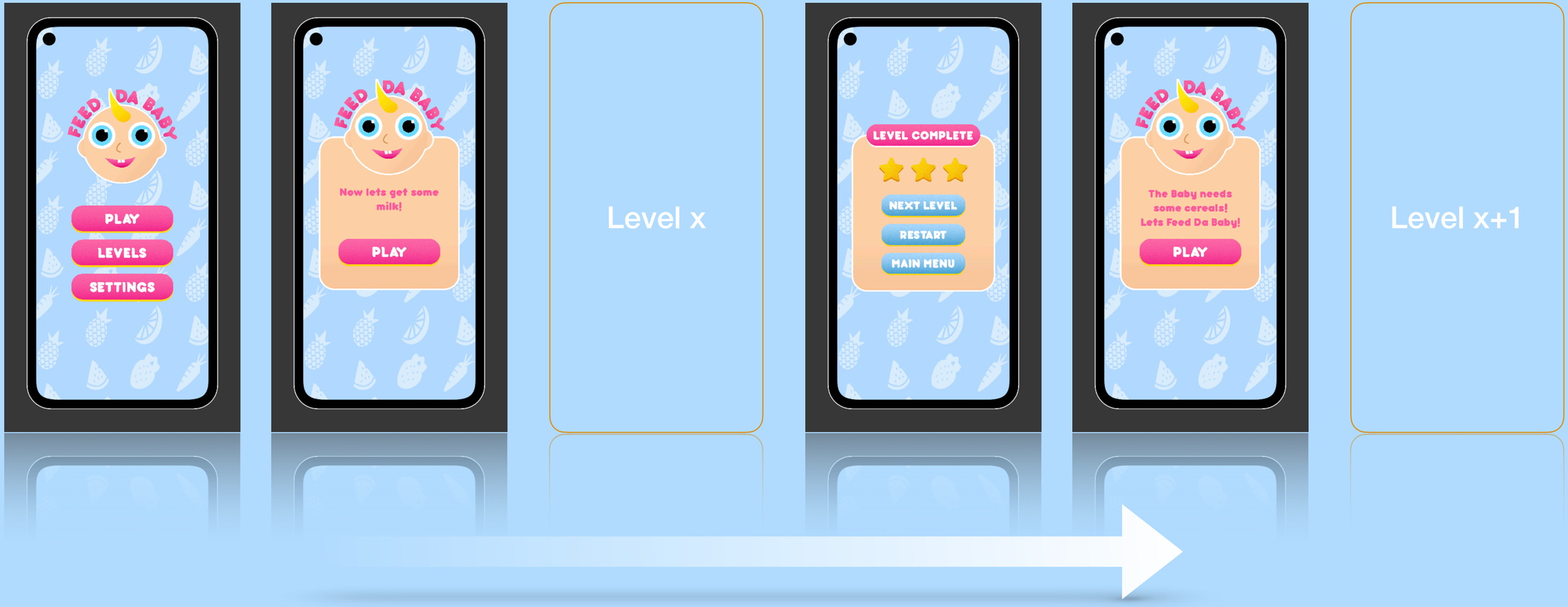
PROTOTYPE

To check the prototype gameplay, CLICK HERE!

UI: The levels will be preceded and followed by GUI screens which will guide the player through the story and the game play of the game.



PROTOTYPE

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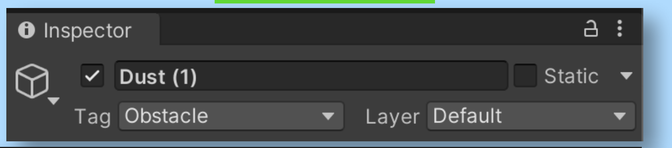
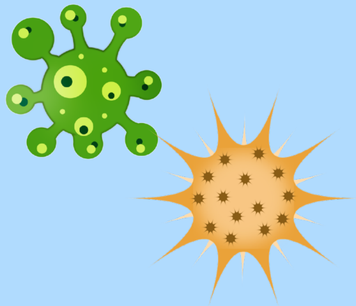
SCORING: The collectibles have been give tags in unity of “Items” and obstacles have been given “Obstacles”. Fetching their tags through scripts, score is either added or subtracted finally giving a star rating.

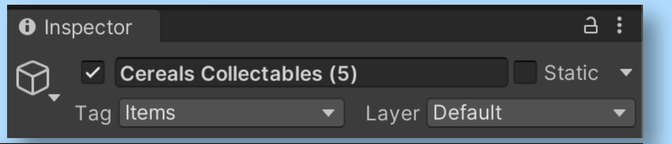
+1




```
if (collision.gameObject.CompareTag("Items"))
{
    collectiblesSfx.Play();
    Destroy(collision.gameObject);
    score++;
    scoreText.text = score.ToString() + " " + "points";
```



-1




```
if (collision.gameObject.CompareTag("Obstacle"))
{
    obstaclesSfx.Play();
    Destroy(collision.gameObject);
    score--;
    scoreText.text = score.ToString() + " " + "points";
}
```

PROTOTYPE

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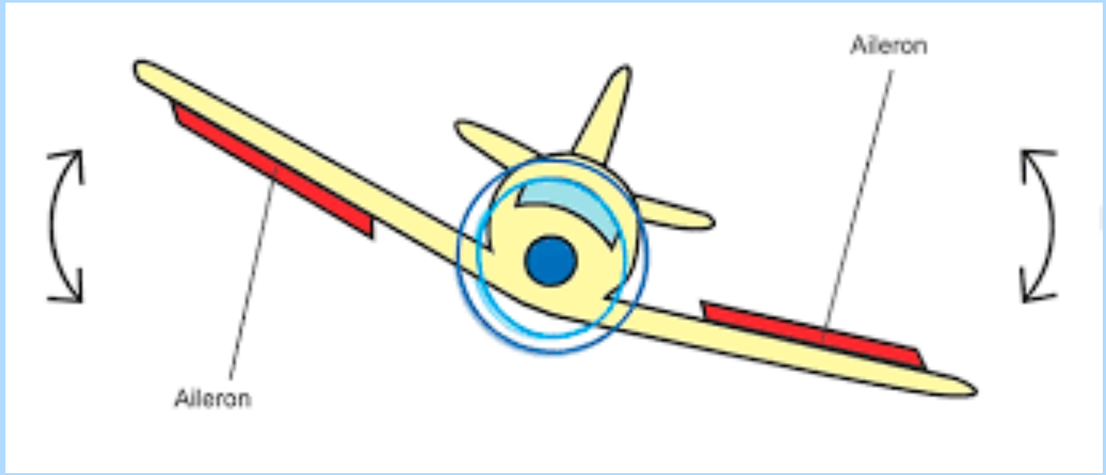
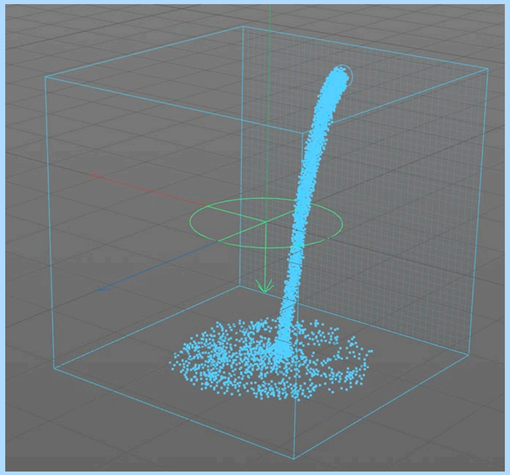
UPDATED MECHANICS: There are 2 mechanics which are essential to the game and are being added :

-**Container filling with food/water/medicine/juice using particle mesh renderer,**
Issue to be resolved: Figuring out the workflow of the particle rendering.

-and rolling the container on its axes to give it a feeling of flying.
Issue to be resolved: When dragged right/left, the player character/container starts spinning and just goes diagonally off the straight track.

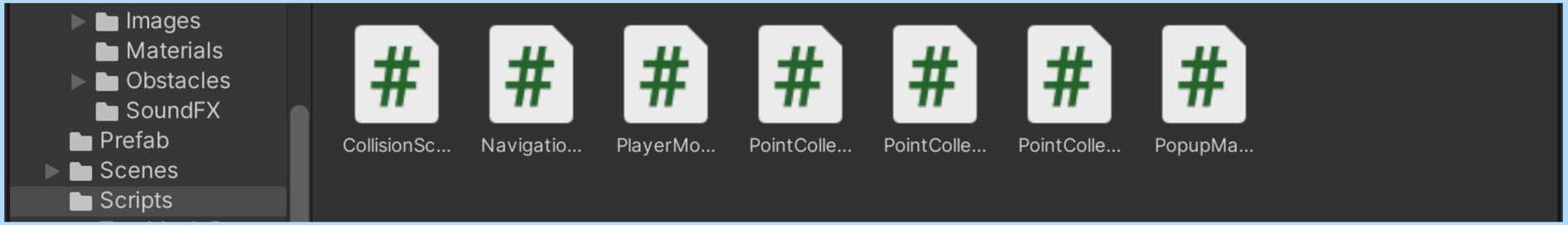




POLISHING AND OPTIMISATION

To check the prototype gameplay, CLICK HERE!

CODE DEBUGGING AND OPTIMISATION: Throughout the process the various scripts and their rolls have been improved. As of now there are 5 kind of scripts: Player Movement, Collision, Point collection, Level UI, GUI navigation. To increase difficulty in levels, we are going to add Obstacle/Collectible Movement script(s) as well.



We use Github to commit our versions of our work to make sure nothing is lost.

UPDATED TRACKER: As a small team, the two of us divide our work and set deadlines for each other to push each other to get the work done asap. TRACKER LINK!

LEGEND>>>		> Not Started!
		> WIP
		> Completed!
	DD/MM/YY	> Late Delivery
	DD/MM/YY	> OT Delivery
	DD/MM/YY	> BT Delivery