**Overview:** Tidying up is a co-op multiplayer game in which players have to work together to clean up the dirty mess in each stage before the time runs out.

Product purpose:

**Target audience:** the target audience would be friends and family of all ages. It would be appealing as players need to work together to clear the stage on time. This game would require task coordination, task delegation and teamwork strengthening bonds with family and friends while being entertain

**Reasoning of how your project demonstrate creativity:** The game design would be based on a pixel art design which gives the classic retro feeling while being a completely new game. This game concept is not in the market therefore being unique and intriguing as player will play a completely new game with nothing similar.

**Features:**

* 22 different stages with different objective and challenges
* a range of characters to choose from
* Animation of characters
* joystick control
* freeform of player movement across all axis as it is a top down game
* different objectives in each stage
* different time limit in each stage
* different items on each stage
* different obstacles on each stage
* sensors for players and items
* bag to show items

**Design:**

Prototype of the application using figma:  
<https://www.figma.com/file/KMZzo3QHbomozUZJiJCnD7/tidying-up-2?node-id=60%3A117>

1. **Screens**: 11

D) **Overall Colour Scheme:** grey as background colour and black as foreground text. To highlight I would either use green or blue to highlight

**Loading page:** this will be shown when first loading up the game

**Fields:** progress bar

A picture containing green, filled, holding, colorful

Description automatically generated

**Login page**: second page shown after everything loads up. User will have to login in here if they already have an account. If not, they will have not sign up by going to the sign-up page. User can also sign up with google account by click the google sign up button

**Fields:**

* Username: email for user account
* Password – password for user account
* Login: check if there is any user with that email and password and sign the user into the game if there is

Additional: Google sign up change to login page instead of signing up page

A picture containing clock

Description automatically generated

**Sign up page:** This is where the user will sign up using firebase. Google sign up is changed to login page

**Fields:**

* Username: email for user account -edit changed to email in the application
* Password – password for user account
* Signup Button – sign up the user to firebase

A picture containing clock

Description automatically generated

**Tutorial page:** This is where the player will be taken after they first sign in. The tutorial will provide the player how to play with the game. User will be having a choice to continue with the tutorial or go to shop. This would provide older player being able to skip this tutorial when the log in.

Fields:

* + Item: different item that will be in the game
  + player: a physical player character
  + Comment: This will be text of directions on how to play the game will be provide on top of the screen
  + Continue with tutorial button: proceed with tutorial
  + Go to shop button: take the user to the shop

A screenshot of a cell phone

Description automatically generated

**Shop page**: The shop page is where users can buy different characters to play with. In the game characters are the character that the user will be able to control during game. The money bar will also show how much money the user has in the account. To buy the character the players will need to have money in the account This page will also contain main navigation for the application.

**Fields:**

* Navigation bar: navigate to levels or setting page or tutorial page
* Character: Characters for the player to play with.
* Money: show how much money the user has in the account

A picture containing table, many, room

Description automatically generated

**Level page:** the level page is where users pick which level, they want to play by clicking the houses on the screen. The see-through houses are level that are locked. Users must clear previous level to proceed to the next level.

**Field:**

* background for the level: the background for the level
* House button: for user to pick which level to play
* Back button: to go back to the shop

A picture containing building, street, photo, many

Description automatically generated

**Inside Level page:** This is where the user will be brought to when they select which level, they want play. In here users can select characters that they own. The objective will first be hidden until at least they cleared the level once as objectives are different from clearing the level. This would encourage players to discover hidden objectives in the game. The user will be given stars based on the time that they finish the game. Player need to get at least one star to clear the stage

**Field:**

* + Character array: character owned
  + Sliding button: The button to choose which character to play in each stage objectives: display the different objective of the game
  + Star: display the time it takes for the user to clear the stage. If they haven’t the complete the level star will be see through
  + Back button: back to level page

A picture containing table, computer

Description automatically generated

A picture containing computer

Description automatically generated

**Settings page:** the setting page of the game this is where the users can set preferences for the game such as changing the user account, recharging money and disabling sound for the game.

**Fields:**

* sound button: disable game sound
* logout button: switch user account
* recharge button: send to payment page
* Navigation bar: navigate to levels or setting page or tutorial page

A picture containing book, truck, green, many

Description automatically generated

**Payment page**: This is where user can trade in game money with real money by paying using apple pay.

Fields:

* Essential fields such as card number, CVV, card expiry date and name on card
* Amount: amount what to be trade for in game currency game $1 = $1 in game currency
* Navigation bar: navigate to levels or setting page or tutorial page

A screenshot of a computer

Description automatically generated

**Data**

1. **Runtime variables:**

* Player:
* Pickable Items:
  + Food
  + Clothes
  + Dishes
  + Book
* Stationary items:
  + Fridge
  + Dishes
  + Sink
  + Wardrobe
  + Table
* Cleaning tools
  + Vacuum
  + Broom
  + Bleach
* Variables for the cleaning tools to pick up
* Enemy
* Timer
* Bag
* Joystick

1. **Permanent data storage** 
   * Sprite image for player animation
   * Sprite image for items such as food, dishes books and cleaning tools.
   * User account:
   * Level scene
2. **API/ Class Structure**

API Class structure might be different from actual application. As something things might be implemented in a different way due to short or time and challenges in writing the desired feature.

**Static Game Scene class**

This is where the static levels are created, such as how to position and arrange the player, items and obstacle;

**Game Scene class**

This is where the main class logic for the static scene class will be written. Such as controlling the players movement, item interaction, and etc. It will be a wrapper of all the other classes. This will also handle the tutorial scene class

**Player class**

This will be initializing the player such as the animation it will be using. For movement such as idle, running or dead

**User class**

This will handle the related information of the user such as characters owned by player and in game money currency. This will also contain the sign up and sign in function to sign user to firebase

**Static Tutorial scene class**

This will be the static tutorial scene that arrange the tutorial scene. The main logic will still be called by the game scene

**Bag class**

This will be containing an array of items that the player picks up.it would contain the logic of removing items and adding items to the bag

1. **Resources Required (optional):**

* Sprite for player animation
* Landscape Image such as tiles, trees, rocks, water, etc
* Item and household items such as wardrobe, table chairs, books, clothes, etc