HouseKeeping Game Design Document

Table of Contents:

1. High-Level Overview

1.1 Game Information

HouseKeeping is a single player or cooperative game featuring teamwork, objectives, and intense time trial gameplay. The game will be developed on the PC platform and it is of the simulation and action genre.

1.2 Game Concept

HouseKeeping is a single player/cooperative game where you go through various levels with houses that have randomized layouts with the objective of taking care of said house. The objective of the game is to complete all required tasks as fast and as efficiently as they can. Two timers will be present in HouseKeeping, One timer counting down. This gives a sense of urgency. Along with a timer counting up, this will play into the reward system, players getting better times with better efficiency will give better rewards. The countdown timer will make players feel that they are always in a race against the clock whether by themselves or with their friends.

1.3 Competitors analysis

Overcooked: Overcooked is the type of chaotic couch co-op experience that we want to build upon. They use communication and teamwork to get the best of their gameplay. Housekeeping will bring out the best elements of this.

Moving Out: Moving out has the similar setting and co-op experience we want for our players. We want to put our spin on the style that game brings to the table.

Please See attached Competitive Analysis
Competitive Analysis

1.4 Story Concept

The main players/character(s) are broke and have been tasked with cleaning customers' houses for money to survive and improve their jobs. The characters know that if they are more

efficient and quick they will be able to make more money during the day. This is due to them being able to get more houses done. What the characters are curious about is that each house and room has a story. It's up to them to discover the mysteries in those houses. The players have a certain amount of time to get the houses cleaned before the owners come home.

2. Gameplay Overview

2.1 **Game concept**

A 2-4 person multiplayer co-op game in which players work together to clean houses quickly.

2.2 **Objectives and Types**

The objectives are alignment (player character must be standing at the location of the item/task in order to interact) and interpersonal coordination (verbal communication of task progression). Main objective is to complete as many tasks as possible using the resources within the given time limit by means of logistical coordination. Tasks may be multi-step (e.g. gather, fold, put away laundry) or single-step (e.g scrub window clean). Tasks may require resource items (e.g. cleaning window requires spray bottle) while others are simple interactions.

2.3 **Core Controls**

Motion - WASD/Left Analog Stick
Turn - Mouse/Right Analog Stick
Dash - Shift/Left Trigger
Interact - Mouse1/Right Trigger (hold)

2.4 **Gameplay Mechanics**

Players must work together to complete all given tasks before the timer runs out. The tasks are scattered throughout the property, allowing for chaotic interactions as they coordinate their resources and behaviors using the cleaning supplies to get all tasks completed in time.

2.5 **Art/World building**

The Artstyle for HouseKeeping is simple yet fun. Due to this game being upbeat and chaotic similar to OverCooked or MovingOut. We are keeping with the cartoony theming, as you will see below with the character design we kept it very simple and cartoony. Our house(s) will keep with this same and cartoony feel. We are using some simple assets from the Unity Asset

Store to provide us with the space for the players to roam. However we will be changing a lot of it. The Art team will be helping us retexture/texture most of the house. Each room will be very distinct from one another. For example The living room will have a yellow theme to it. The artists will be helping us by making this room feel obvious that it's a yellow room however not making it too overbearing. Color coding rooms like this will provide players a sense for communication. This essentially makes call-outs very easy such as “Hey there's a task that needs to be done in the yellow room!”.

2.6 **Animation**

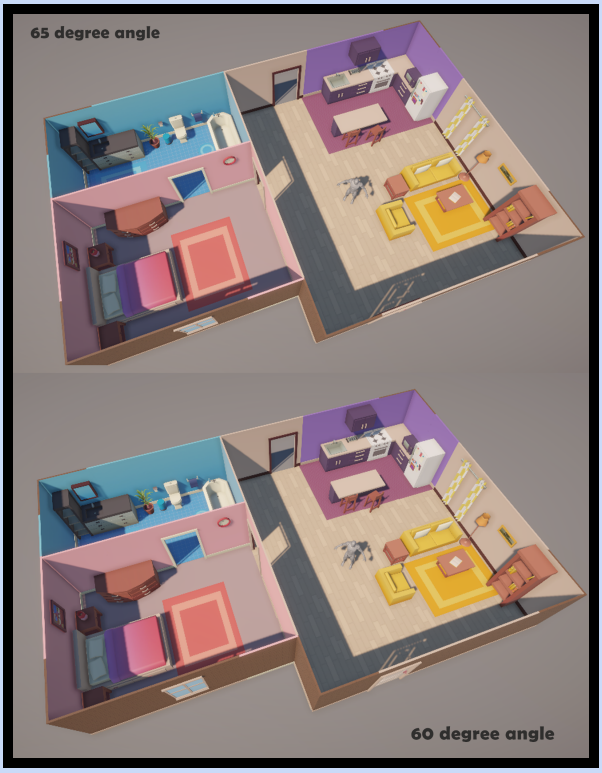
Animation will be kept fairly simple, we will be using LAR’s or Live Action References to help the animation team out. We have put together an asset list that will provide the animation team a detailed list of our needs. Some of the animations include walking, sweeping, washing a dish such as a hand going in a circular motion. More can be found here on our in-depth asset list.

Animation Asset List
Animation Asset List

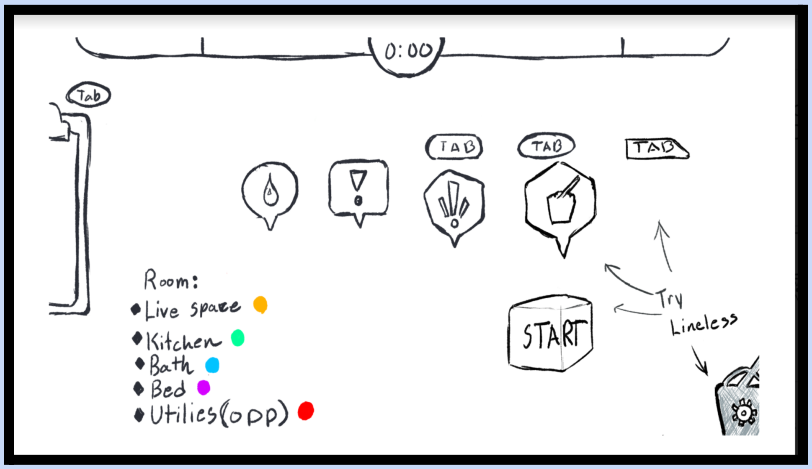
3. Camera/Front end/UI

3.1 **Camera**

The camera will be set in an Isometric state from the player. This will be currently set at about a 60 degree angle. The camera will follow the player as they move around the house. Coding will need to be done to fade the walls in and out so it's not in view of the player.



Here is an example of the HUD players will see when enjoying HouseKeeping. A timer showing the amount of time the player has left, along with the sliders decreasing with the timer and increasing showing progress. Icons are also shown in concept of what players can expect to look for when a task needs to be done. The clipboard can be pulled out to show a detailed description of the task(s). Finally this concept art shows an idea of the color coding that will be in each room. This makes for easy player callouts.



3.2 **Menu Flow**

****Please see attached flowchart, showing how the player will get through the menus.***
[Menu Flowchart]
[Options Flowchart]

3.3 **Front End**

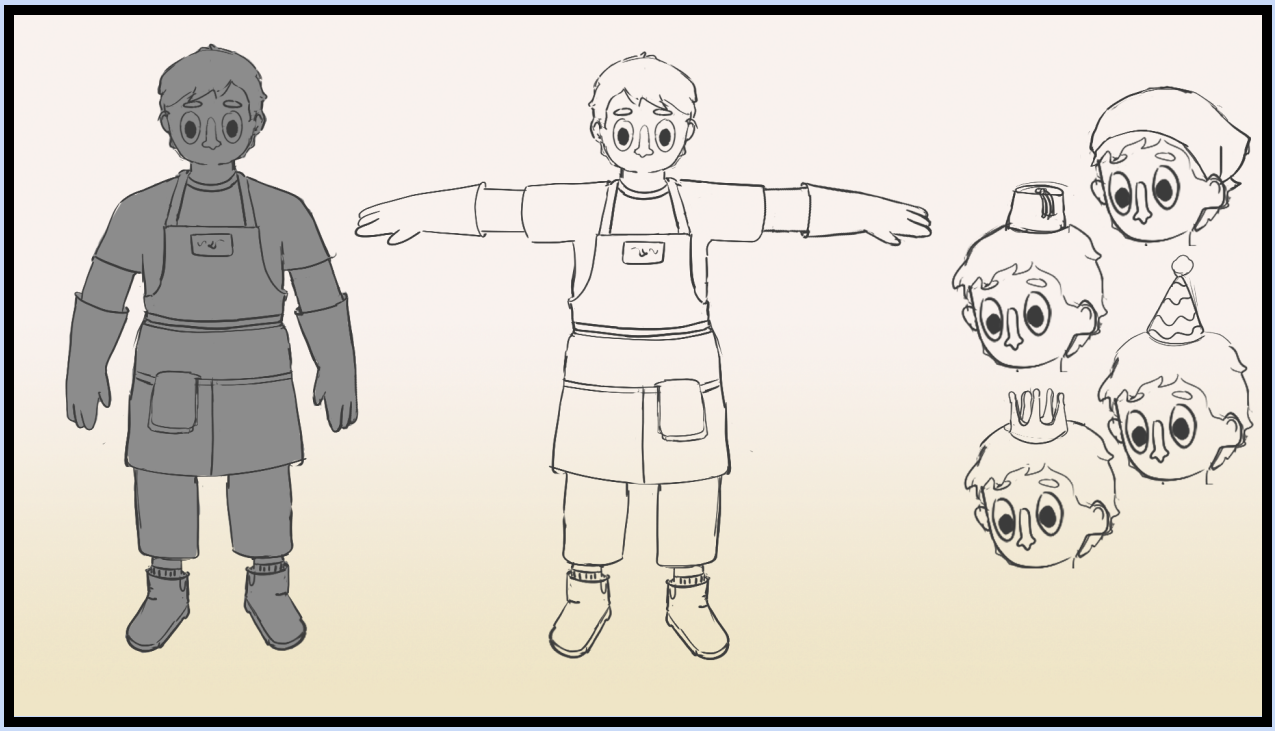
This is a concept for the main menu, if you mouse over any button it will grow and the other buttons will shrink. If you click play it will take you to player setup. Game clips play in the cloud in the bottom right.

4.Characters/NPCs

The main character(s) is called Keepers. Each character/player will be able to choose which hat they would like to wear. Multiple players will be able to wear the same hat if they so choose to do so. Each player/character will also be able to choose their own color in the UI elements.

One of the only NPCs to be in the game is the NPC Boss: Who only shows up in text/UI to yell at the players to do the work faster.

The Racoon is an actual model that walks up and touches the trash can and more trash goes everywhere. The raccoon is static and is not able to interact with and will be at random intervals and will stop once a certain amount of tasks have completed. The trash however will be interactable and be able to be picked up similar to the bugs you are able to spray roaming the map.



5. Narrative/Expanded Gameplay of Player in Flow

5.1 **Gameplay Flow**

Gameplay Flow Diagram

5.2 **Gameplay Timeline**

- Level loads in, items visible (no UI indicators before timer starts)
- Players may begin planning based on what they see on the map
- Level begins, UI indicators populate, timer begins counting down
- Players decide which tasks to do first and who gets what items to start
- Players split up, each goes to a different task location
- Interaction with task is done by either single press or press and hold
- Completion of task marked by sound, indicator vanishes
- Verbal communication between players continues during task to prepare for next task
- If all tasks are completed before timer runs out, success
- If timer runs out and enough tasks are not completed, failure
    - Playtesting will determine appropriate thresholds, may use mixed-progress where if enough tasks are done, level progresses but bonus items do not unlock

5.3 **Sample level Timeline**

- One-Room Hotel Room
- One-Bedroom Condo
- One-Bedroom Townhouse w/ Yard
- Two-Bedroom House w/ Yard
- Two-Bedroom House w/ Yard + Shed

6.Sound

6.1 **Overview**

The music in HouseKeeping will be simple and upbeat. The music can transition from happy to intense once the timer gets close to being finished with the amount of allocated time. Audio levels will be able to be changed in the settings menu should it be too loud or annoying for players.

6.2 **Level**

Level sounds include the happy upbeat music that can change as described above. With more sounds including footsteps as players move, spray noises when the spray can is going off. Mopping noises for when the player is mopping or cleaning windows. More sounds can be found on the asset list attached below. When the player does something positive such as complete a task play an upbeat sound to reward the player.

Audio Asset List

7.Technology

7.1 **Unity**

We are using Unity version 2022.1.10f1 to develop Housekeeping, as well as Plastic: SCM for the purposes of sharing the build of the game with the rest of the team. Plastic will allow anyone accessing the project to create new assets or edit existing ones. Communication with one another should be frequent, informing one another when or in what way they will be editing assets, so that conflicting edits do not occur.

We are using the object oriented C# for coding. When creating code, using comments with the format '//message' is encouraged for the purpose of explaining the significance of any lines written.

The Unity Asset store will be used to gather certain asset packages that could help cut down development time and help maintain focus on developing the core features of Housekeeping.
Unity Packages

7.2 Multiplayer

The intention for the project is for multiple players to be able to cooperate at the same time to finish a stage. This will be achieved through the use of Unity's (as of documenting this) new Input System package.

This Input System will use an input manager to instantiate player prefabs with their own temporary iteration of an Input Action asset, only reading the inputs of whoever pressed the join action to create that player.

As of yet, the system can only read the inputs from a handful of different controllers. To register a new controller, one would need to first register a Join Action (Like Start or Select) in the Player Input Manager, likely to be placed on the GameManager object. They would then need to locate the Input Actions asset in the Input folder, then add and configure a new binding for each of the inputs. For better context, watch this.

7.3 Universal Renderer Pipeline

The Universal Renderer Pipeline is being used for this project. This will allow greater flexibility for our artists, as well as the ability to create shader graphs for the easy creation of more dynamic materials.

8.Team

8.1 Full Production Staff Breakdown

Our Production pipeline will be arranged using productivity elements such as Trello, Miro Board and Google Suite. In order to meet our milestones we will be using the Scrum/Agile Methodology. Breaking these tasks into User-Stories that will become the tasks we will need to complete for "Sprints".

For anyone that doesn't know what sprints are, they are around 2-3 week cycles of getting tasks done to get a working prototype at the end. However this is not a Crunch, people choose their own tasks to do throughout the sprint and tasks that don't get finished will be moved onto the next sprint. As sprints go on they will add up to having completed and reaching milestone goals.

Below is a breakdown of roles and responsibilities of team members.

Producer: Shawnna
Lead Gameplay Designer: Cotter
Lead Programmer: Tim
Lead UI Designer: Paul
Lead Artist: Chelsea
Lead Animator: Armineh
Artists: Jake, Carter, Ian
Animators: Adeana, Adrian, Diego, Jordan, Chris, Ivan, Mercedes

Producer will be responsible for keeping the team on track, scheduling meetings, helping the other designers work on code and other design aspects. Additionally, Producer will document meeting key points, creating the Discord and more.

Lead Gameplay Designer will be responsible for coming up with the core gameplay mechanics and coding how they will be working in the game. This Designer will also be working closely with the other designers and coders to come up with ideas and implement them into the game.

Lead UI Designer will be responsible for creating any UI aspects of the game. This designer will be responsible for coding up these aspects of the game and designing how those aspects look.

The Lead Programmer will be responsible for coding the main elements of the game, as well as more complex elements of the game. Additionally, the Lead Programmer will conduct code reviews to make sure all of our code works together.

The Lead Artist will be responsible for managing the Art team as well as creating the Art Bible and models. Other art and textures will be divided up within the art team.

Lead Animator will be responsible for managing the animation team as well as bringing up considerations for animation with Design/Art.

Artists will be responsible for creating textures, models and other artistic aspects for the game as requested by design.

Animators will be responsible for creating the animations, skeletons and more for the game as requested by design and art.

Risk Analysis Link
Risk Analysis

9.Wrap-up/Key Feature Summary

HouseKeeping is aiming for an audience of people who enjoy simulators but also enjoy the chaotic madness of some party games. Initially as stated above HouseKeeping will be released on the PC platform for free. Our main supported languages are English, if we choose to work on this project later on we can update later to support Spanish, French, Italian etc.

Later on we have discussed adding Minigames to HouseKeeping however we will see soon how far we can get at mastering gameplay before moving onto that.

As described above in the Gameplay section we will be focusing on teamwork and communication to make this game a lot of fun. Along with the tasks the player must complete in order to get better efficiency.

Overall this document will update/change/iterate over time and I'm sure the HouseKeeping Team will really enjoy putting this game together.