Handover and Completion Report

Group 2
John Alabasinis - 22090614
Jana Nasrallah - 22079884
Salman Rashid - 22080099

Professional Experience

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Introduction

This handover report documents the testing and development of the CPTED (Crime Prevention through Environmental Design) game project. The report provides an overview of test results for key features, implementations, and outlines outstanding work and known issues. Additionally, this report ensures a smooth transition for future development and maintenance by clearly communicating the current functionality, changes made during the project, and any remaining issues that require attention.

Candidate Test Results

Test Case	CPTED Game
Feature ID	**F001**
Feature	Object Manipulation
Test Purpose	To ensure that the user is able to successfully move the object to a desired position, and that position is saved.
Screen Ref	Screen No. #1
Expected Results	1. The object follows cursor 2. Object moves smoothly 3. Object stays in position
Test Status (Successful/Failed)	**Successful**

Test Case	CPTED Game
Feature ID	**F002**
Feature	Trash Bin Functionality
Test Purpose	To ensure that an unsafe object is able to be removed by the user successfully, and that safe objects cannot be.
Screen Ref	Screen No. #1
Expected Results	1. The unsafe object is able to be dragged and trashed by the user. 2. Safe objects cannot be trashed by the user.
Test Status (Successful/Failed)	**Successful**

Test Case	CPTED Game
Feature ID	**F003**
Feature	Score System
Test Purpose	To ensure that users can gain points for placing an object in optimal positions in the scenario, and that they gain none when an object is not placed in good positions.
Screen Ref	Screen No. #1

Expected Results	1. A user is able to gain points by placing safe objects in optimal positions in the scenario. 2. A user who places an object in no optimal positions gains no points.
Test Status (Successful/Failed)	**Successful**

Test Case	CPTED Game
Feature ID	**F004**
Feature	Level Configuration
Test Purpose	To ensure that the predefined layout of the scenario is always the same when the user opens the level. E.g. the unsafe objects are in their positions.
Screen Ref	Screen No. #1
Expected Results	1. The level's predefined layout is always the same.
Test Status (Successful/Failed)	**Successful**

Test Case	CPTED Game
Feature ID	**F005**
Feature	User Interface Display
Test Purpose	To ensure that the buttons respond to input and that tooltips successfully appear when a user's cursor hovers over the object.
Screen Ref	Screen No. #1
Expected Results	1. Buttons respond to input 2. Tooltips appear when mouse hovers over object
Test Status (Successful/Failed)	**Successful**

Test Case	CPTED Game
Feature ID	**F006**
Feature	Audio Feedback
Test Purpose	To ensure that background music and sound effects play. E.g.

	when a user trashes an object, a sound plays. When a user places an object, or clicks a button,
Screen Ref	Screen No. #1 #2 #3
Expected Results	1. When a user clicks a button, a sound effect plays 2. When a user opens the app, background music plays 3. When a user opens a level, background ambience plays
Test Status (Successful/Failed)	**Successful**

Variation Report

Screen Variations				
Type	**Variation**	**Initiated By**	**Priority**	**Implemented?**
New	Pause menu layout change - changed from icons to words for ease of use	Team	Optional	Yes
New	Homepage - No logo for the game, just the name.	Team	Optional	Yes
New	Homepage - Added extra button for extra information about CPTED	Academic Supervisor	Required	Yes
New	Level Submit Screen - Changed layout for ease of use	Team	Optional	Yes

Functional Variations				
Type	**Variation**	**Initiated By**	**Priority**	**Implemented?**
Requirement	Invalid drop zones do not prevent object placement, rather they don't award any points.	Team	Required	Yes
Requirement	Users get points based off object placement proximity	Academic Supervisor	Required	Yes
New	Levels are no longer locked through progression	Team	Optional	Yes
New	Background can change based off points earned	Client	Optional	Yes

Outstanding Work and Known Bugs

Bug 1 - Fence with Point system

If the user places a good fence type, they are rewarded with maximum points, and if they place a bad type, they are not awarded any points.

However if they place the good fence type first and then replace it with the bad fence type, the points do not get refunded - the user still keeps the same points.

Outstanding Work 1 - Per-Level Pass Score Thresholds

Currently, the game uses a **global pass score** (set at 30 points in `end_panel.gd`) that applies across all levels. This ensures consistent evaluation and simplifies testing for the first release. However, feedback from playtesting suggests that some levels may require different levels of challenge. For example:

- **Tutorial** could retain a lower threshold (e.g., 20 points) to ease new players into the game mechanics.
- **Intermediate levels** (e.g., Basketball Court) could raise the requirement to 30 points.
- **Advanced levels** (e.g., Storefronts) could be tuned higher still (40+ points).

Implementing **per-level score thresholds** would allow difficulty scaling and more granular feedback without affecting the existing global logic. This could be achieved by:

1. Adding an exported `pass_score` variable to each level's `GameManager.gd`.
2. Overriding the global default from `end_panel.gd` if a per-level value is set.
3. Documenting thresholds in design notes for clarity.

This enhancement is not essential for the current delivery but would make the feedback system more adaptive and engaging in future versions.

Conclusion

The testing carried out on the CPTED game confirms that all major features outlined in the project scope are functioning successfully, and all required and optional variations have also been implemented. A limited number of known issues remain, which have been documented for future resolution. Furthermore, this report provides the necessary information for a future team to continue and maintain the project effectively, ensuring quality, and addressing outstanding bugs.