Game Development Assignment Report

Game Title: Roma Termini Adventure

jin giacomo 24216191

Main Story

The protagonist is a gangster at Roma Termini Station. His objective is to catch the last train before it's too late. To reach the platform, he must navigate through police officers and homeless people, facing turn-based battles along the way.

- **Win Condition:** Reach the **train line** before the timer reaches zero.
- **Lose Condition:** If time runs out, **the train is missed, and the player loses**.

The original action-shooter has been **redesigned into an action-adventure game with RPG elements**:

Key points

Overworld Exploration & Movement Scaling:

The player explores a **real-world-inspired map** of **Roma Termini**. As the protagonist moves, their **sprite dynamically scales**, adding depth to the game world.A **second player helper (dog companion)** moves autonomously and interacts with enemies.

Turn-Based Battle System:

Battles occur when the player encounters **police officers or homeless enemies**. The available combat actions are **Attack, Beg, Seduce, and Steal**, each with **unique animations and sound effects**. Each **enemy type has different attack patterns**.
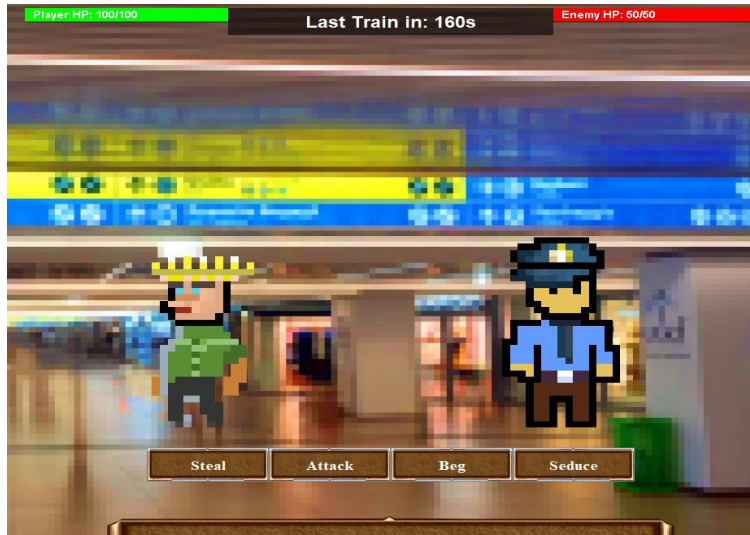
Level Progression & Time-Limited Mission:

A **countdown timer** determines if the player **reaches the train in time, i**f the timer runs out, the **train is missed, and the game is lost**.

Dynamic Difficulty Selection:

Players can **change difficulty** before starting. The Difficulty Modes include **"Normal," "Hard," and "Speedrun,"** they affects the time left to catch the train.(180 ->120 ->60 seconds)

Features & Enhancements

Core Gameplay Enhancements

Turn-Based Battle System with enemy-specific **attack patterns and animations**.
**Player Scaling Mechanics:** Character size changes dynamically as they move.
Enemy Collision Mechanics: Various methods used to **handle enemy interactions**.
**Dog Companion:** Moved by Player2 and **assists the player in exploration.**
Game Timer: Adds a **sense of urgency** to reach the train on time.

Visual & UI Improvements:

- **Hand-drawn sprites** for **player, enemies and animations**.
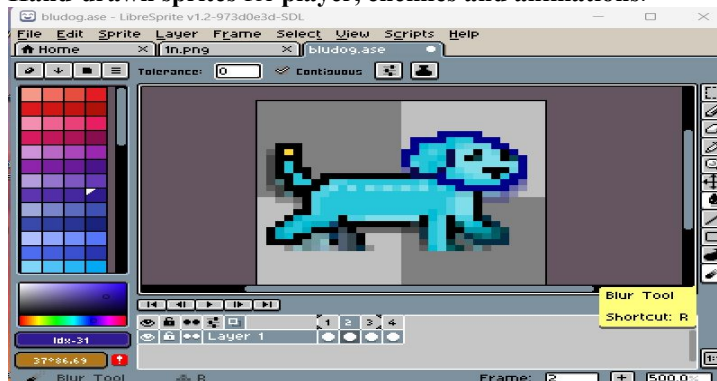
- **Background** pictures are pixel-edits of accurate photos made by my friend in Rome of the **Train Station Termini.**
- Implemented **collision boundaries** to prevent movement outside the playable map.
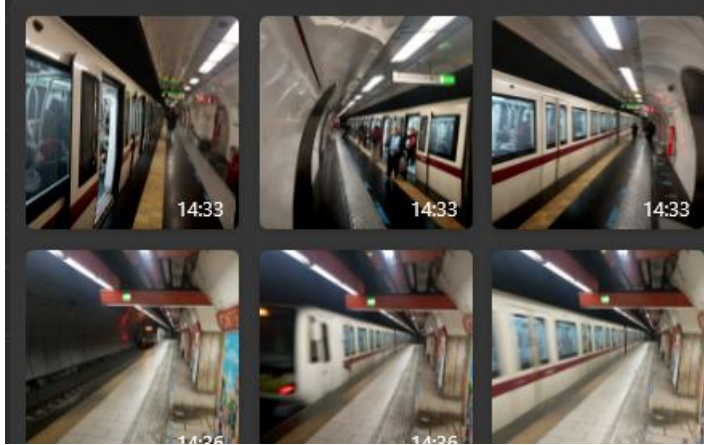
- **Fade-In Intro Scene:** Game starts with a **black screen fade-in** to enhance immersion, similar mechanics is implemented for the transition between battle scene and overworld scene.

Sound & Animation

Background Music: (FREE) Boom Bap Freestyle x Old School Rap Type Beat - Banknotes and - Rome walk in railway station audio -> **Audacity** to handle audio mixing and problems
Custom Sound Effects: Train sounds, police encounters, battle actions obtained here:
Freesound – Search

Implemented Multithreading for Background Sound: Prevents **lagging of main thread**.
Battle Animations Implemented(all handmade using libresprite):

- **Gun Shooting (Attack)**
- **Heart Floating (Seduce Action)**
- **Money Flow (Steal Success)**
- **Police Baton Attack**
- **Drunk NPC "Shit" Attack**

Multiple Controllers & Input Handling

- **Player 1:** Uses **WASD for movement, spacebar to shoot money, F to make celebration sounds.**
- **Player 2 (Dog Companion):** Uses **4856 for movement** and **0 for barking**
- **Turn-Based Combat:** Uses **button-based inputs** for selecting battle actions.

Fonts

- **Buttons and BattleLog:** OpenGameArt.org
- **Sound Effects:** Custom & OpenGameArt resources, youtube, freesound
- Chatgpt 4o helped me in the fading effects and the multi threading of background music