

Project (Fall 2025)

CS-1002 : PROGRAMMING FUNDAMENTALS





In a world overrun by mischievous monsters, two brave heroes stand ready to restore peace. Armed with their vacuum guns, they must capture creatures, turn them into projectiles, and clear each stage of the monster invasion. Join our heroes as they battle through multiple zones, facing increasingly challenging enemies and treacherous platforms, culminating in an epic showdown with the giant Octopus boss!

[Gameplay can be watched here](#) for reference



Phase 1

CHARACTER SELECTION

Before starting the game, players **must** choose one of two characters, each with unique abilities:

Yellow TumblePopper

A steady but tactical character built for control.
Moves at standard pace but wields a 1.2× stronger and wider vacuum than normal.
Ideal for strategic players.



Green TumblePopper

A quick and agile character built for mobility.
Moves around 1.5× faster than normal, while his vacuum power is standard as given in gameplay.
Perfect for fast paced action.



GAME MECHANICS

The Vacuum Device

This is the heart of your gameplay. A suction device that sucks up all the enemies for you to use as projectiles later on in the game. Watch the Gameplay video to fully understand its mechanics.

However, there is a slight deviation from the original gameplay that you should implement.

Your vacuum can point up down left right controlled by W A S D key strokes.



ENEMY CAPTURE AND RELEASE

The enemy capture and stunning mechanism is to be followed exactly as seen in the gameplay. Hold the **spacebar** for enemy suction and capture.



The release system, **however**, is not to be done as prescribed in the original game.

Enemy suction capacity is capped at **3** in Level 1, while its **5** in Level 2.

As opposed to the original; the enemies can be shot in four direction. If it's shot up then it should pass the platform above and carry out the regular rolling motion. If downwards, the rolling enemies should start the regular motion one floor downwards. If at the top-most or down-most floor; then it should bounce off and carry on the regular motion.

Single Shot: Assign a specific key that empties and shoots one enemy at a time, shooting the last sucked enemy first.

Vacuum Burst: Releases all the enemies at once on press of a key of your choice. It should still follow the order prescribed. This is much similar to the original game play.

The enemy release moment is to be done exactly as in the original game play along with the added projectile movement as described.



ENEMIES

The enemies will follow their movement as seen in the gameplay video; if otherwise, **it will be stated**.

Ghost

The most common foe encountered, the Ghost drifts across the platform in a slow, rhythmic pattern. It follows a simple left to right pattern with occasional stops and change of direction. It instantly defeats the player upon touch, reducing their life count.



Skeleton

A ground based adversary that patrols the platforms constantly; unpredictably able to jump between platforms. It follows a left to right pattern with stops and change of vertical and horizontal directions.

Invisible Man

This enemy unpredictably teleports its way to you. The Invisible Man follows the left to right pattern with random outbursts of complete invisibility and teleportations across platforms.

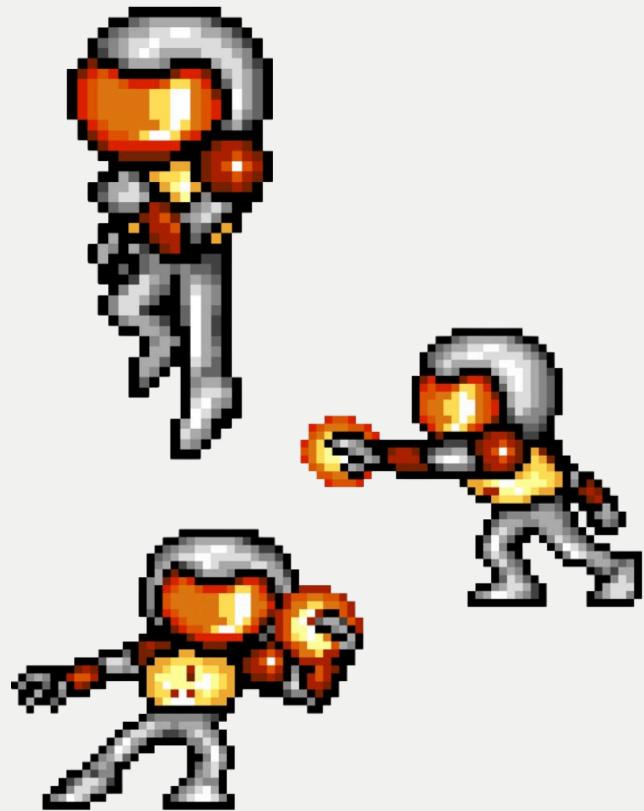


Chelnov

A high-threat ranged enemy designed to pressure players from a distance. It follows the same left to right movement with the ability to shift between platforms as seen in the gameplay.

Every 4 seconds, it locks on and fires a straight-line projectile.

Additionally, during its 1-second shooting phase, Chelnov cannot be captured.

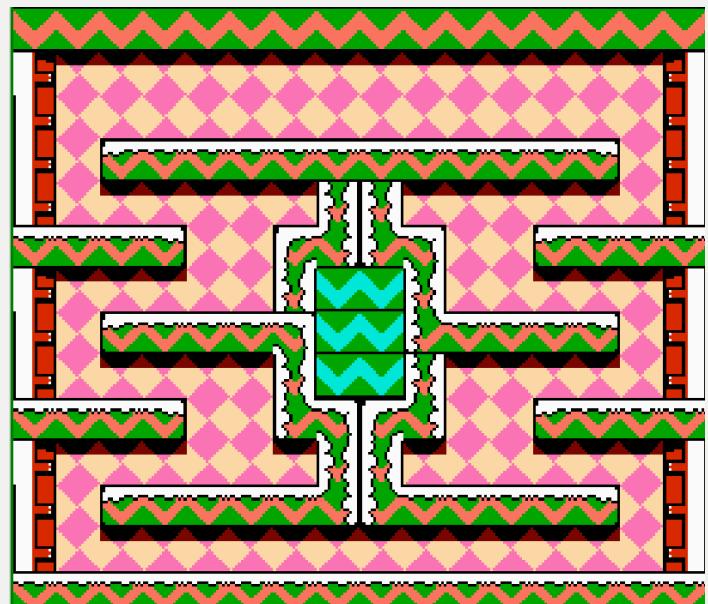


LEVEL DESIGN

Each level must have a unique background and music, subject to your own creativity and implementation.

Level 1

The starting level; built upon simple straight platforms (*as shown*). It has 8 ghosts and 4 skeletons that spawn at the start of the level. Defeating all of them will move you forward to the next level.

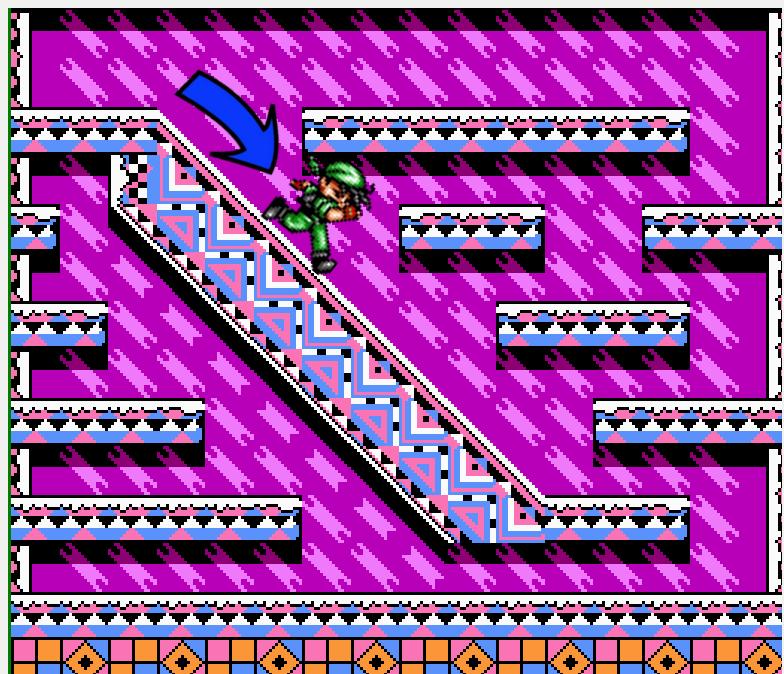


LEVEL 2

This is an intermediary level that has a number of stuff going on.

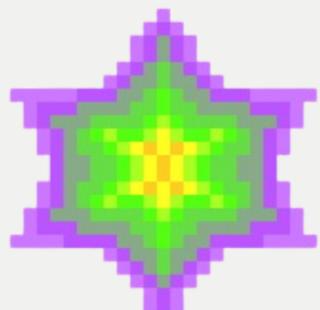
- 1- It has slanting platforms with **randomised** platform generation.
- 2- It has all 4 enemies that get spawned sequentially.
- 3- 3 invisible man, 4 chelnov, 9 skeletons and 4 ghosts.

What changes from the original is that the player **cannot stay still** while on a slanted platform, it will slowly slide down to a straight platform.



POWERUPS

Speed	Range	Power	Extra Life
Doubles the current speed of the playable character.	Increases the suction radius of the vacuum device.	Increases the suction power of vacuum device	Grants you an extra life.



POINTS SCORING SYSTEM

CATEGORY	ACTION	POINTS
ENEMY ACTIONS	Capture Ghost	50
	Capture Skeleton	75
	Capture Invisible Man	150
	Capture Chelnov	200
	Defeat by Projectile	2X points
COMBAT BONUSES	Multi-Kill (2 enemies)	200
	Multi-Kill (3+ enemies)	500
	Aerial Defeat (mid-air)	150
	Vacuum Burst (3+ enemies)	300
COMBO MULTIPLIER	3-4 streak	1.5x defeat points
	5-7 streak	2.0x defeat points
LEVEL 1 BONUSES	Level Clear	1,000
	No Damage	1,500
	Level Finish Speed (<60s / <45s / <30s)	500 / 1,000 / 2,000
LEVEL 2 BONUSES	Level Clear	2,000
	No Damage	2,500
	Level Finish Speed (<120s / <90s / <60s)	750 / 1,500 / 3,000
CHARACTER BONUS	Speed Demon / Max Capacity	500
PENALTIES	Take Damage (lose 1 health)	-50
	Death (lose all 3 health)	-200

Note: Each level starts with 3 health points. Health resets at the start of each new level.

Phase 2

COMING SOON

THAT'S ALL FOLKS!

(For now at-least)



You and your group-mate after completing the project