

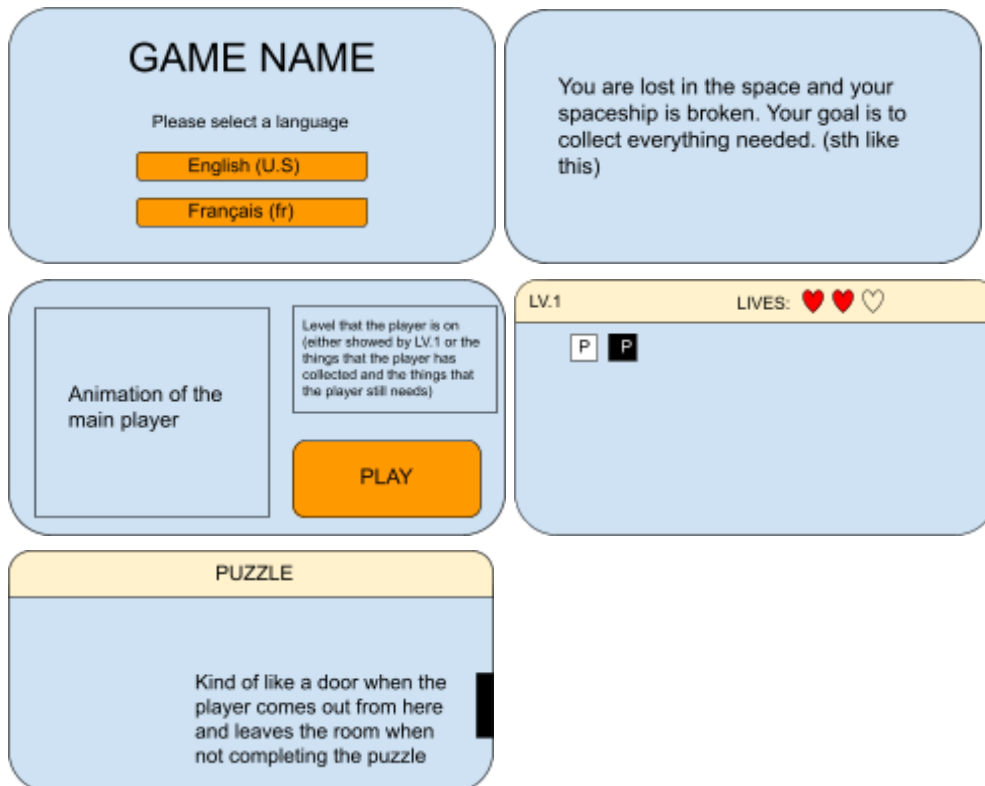
Game design document

CONCEPT ELEMENTS

- Game concept: the player is an astronaut who had an accident he can't remember. His ship is in good enough condition to keep him alive but not enough to go back home. He's lost in an asteroid belt. The asteroids look like they were once inhabited (dug galleries in the bigger asteroids, abandoned pieces of ships). His main goal is recovering the pieces he needs to repair his ship. He is accompanied by the ship mind, an AI that will be his companion through his adventure.
- Audience: all public
- Fulfilling your player's dream: being in space and exploring the remains of a lost civilization

PAGES

- Introduction page: selecting the language of the game
- Introduction page 2: introduce the basic story of the game and the goal of the player (with a possibility for the player to skip it if he wants)
- Main page: keep track of the level of the player (what is has collected) and buttons to enter the main game page
- Main game page: the page that contains main game, the lives of the player, enemies, and also little room to the puzzle level page (stepping on P enters the puzzle room, and the color of the "P" changes if certain puzzle is completed)
- Puzzle page: contains the puzzle (disappear whenever puzzle completed)



LEVELS

- Main goal : find the piece available in the level to repair your ship. The level is completed when the piece is found (maybe 100% completed when you completed all the secondary goals). There is only one piece available per level.
- Secondary goals :
 - Completing all the puzzle rooms
 - Finding some artifacts of the lost colons (some kind of golden coins maybe)
- Two kinds of levels :
 - Maze kind : inside one asteroid
 - Field kind : in an open field with some little asteroids floating
- Enemies : some ghosts are there, they can attack you by triggering an explosion around themselves (see ENEMIES). You can protect yourself with a force field that can only be activated a limited amount of time before needing recharging (you can see the amount of energy left in a gauge). You can also recharge in some puzzle rooms.
- Puzzle rooms : rooms scattered in the levels, if you find one and solve the puzzle, you either
 - Win one life point or a fifth of the force field reserve (your choice or imposed?)
 - Find a key to unlock a door in the labyrinth
- Difficulty of the level : determined by the number and proportion of enemies (maybe also less puzzle rooms)
- Getting out of the level :
 - Finding the missing piece “teleports” you right at the beginning of the level
 - Else you can go back the way you came and stepping through the main door

PLAYER

- Defense : force field that can be activated around the player
 - Represented by a circle whose diameter is a bit larger than the astronaut's size.
 - Use is limited by a reserve that empties according to how long you used it (not how many times)
- States : idle, moving, dead, door, respawn
 - Idle : nothing is happening, the astronaut doesn't move, the astronaut shows the last frame of the last animation (breathing?)
 - Moving : the astronaut moves with an animation
 - Dead : animation of the character dying
 - Door : animation of the character entering a room through a door
 - Respawn : the character is back at the beginning of the level, little animation
- Life / energy reserve
 - Beginning of the game : 3 life points, 30 energy points reserve
 - When all the golden coins are collected in a level, the player's maximum life increases by 1 or the reserve of energy increases by 10 points (player's choice).
 - Maximum 10 life points and 100 energy reserve points
 - The reserve of energy and the lives are displayed at the top or the bottom of the screen.

SHIP MIND COMPANION

- Role : explaining situations to the player, such as puzzle rooms, commands, etc

ENEMIES

The ghosts can only hurt you by creating an explosion around themselves (represented by a circle whose diameter is a bit larger than the ghosts' size). They all have our states : passive, suspicious, active, explosive.

- Red ghosts : angry ones, react like the rocket we coded in class and stay in a predetermined area.
 - They attack you when you are in their area until you're out of their area or until you're dead.
- Blue ghosts : sad ones, don't see or attack you unless you are very close.
 - They attack you when you are in a small circle around them, go back to passive as soon as you get out of the circle or when you're dead.
 - Don't stay in state suspicious.
- Yellow ghosts : stubborn ones, chase you for some distance.
 - They attack you when you're in their patrolling area until you're out of their chasing area (around thrice the size of the patrolling area) or until you're dead.
- Green ghosts : sly ones, will stay hidden (like at a corner in your path) and try to take you by surprise.
 - They attack you only once when they ambush you and then go back to passive. Reset after a certain time (long enough to allow you to get away but not too long either).

COMMANDS

- Z : moving up
- Q : moving left
- S : moving down
- D : moving right
- L : enter a puzzle room (only if in level and before a puzzle room)
- K : activate force field if the reserve of energy is not empty.
- M : gripping a wall

PHYSICS

Moves are without friction. Collisions with the walls are not ideal : Descartes' law on reflection applies but the speed is multiplied by 0,8 at each collision. You can grip a wall by pressing M if you're close enough (under a certain number of pixels away). It stops you immediately.

GRAPHIC RESOURCES

Background:

[Space Backgrounds](#)

Asteroids:

[Asteroids](#)

[Asteroids pack N01](#)

added

Enemies:

[Alien UFO pack](#)

[Ghost Sprite Sheet :: rpgmaker.net](#)

added // ghost size : 24x32

Explosion:

[Explosion Set 1 \(M484 Games\)](#) (yellow one)

[Explosion Set 2 \(M484 Games\)](#)

Player:

[Space Soldier \(M484 Games\)](#)

[Space Man \(Space Bot Rework\)](#)

[Spaceman sprite sheets](#)

added for test // spaceman size : 35x52

Force field:

[Shield effect](#)

[Shield Aura Effect](#) (same in different colours)

[Shield Sprite](#)

Spaceship Elements:

[SpaceShip Building Kit](#)

GUI:

[Menu Panels](#)

[Sci-Fi Infobox](#)

Tileset + some background

[Space Platformer Game Tileset by Shivart](#)

added // tile size : 64x64

<https://itch.io/search?q=space>

CLASSES

GameEngine

FileReader

MainGame

AnimatedImage

 Asteroid

 Treasure

 Door

 MovingAnimatedImage

 Player

 Ghost

TestPlayer