

# Programming Fundamentals I: project proposal - Space Survival

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## Concept

Space Survival is a game where the player controls a spaceship that has to travel from a starting portal to the next one. Every portal brings the spaceship to the next level of the game. There are obstacles and enemies which the player needs to avoid or shoot down with the spaceship's cannons, but energy is limited: energy for movement is consumed but recharges slowly and constantly, while if the player shoots a moderately large part of the energy is suddenly consumed. If there's not enough energy to shoot, it won't be allowed, if there is no energy left, it will not be possible to move until some of it has been recharged.

## Goal

The goal of the game is to earn as many points as possible before getting killed three times (three lives are available at every start of the game). The player loses one life each time the health bar reaches zero; the health bar is decreased when damage is taken from obstacles or enemies.

## Structure

The scene is always centred on the spaceship, and the player can only see the range around the spaceship allowed by the game's window. Going out of the border of the game will be prevented (Radioactivity that decreases life?

Wall of asteroids? Laser borders?) and an indicator of direction towards the exit portal will be placed around the spaceship.

## **Expansion**

Bonuses and maluses could be added to give greater fire power, more speed, less armor, decreased speed, more lives, less lives, ...

## **Design**

We are planning to design the sprites for the game ourselves.