

# MAC0499 - Undergraduate Thesis - Project Proposal

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## Introduction

This project proposes the development of an interactive 2D top-down game set on the Butantã campus of the University of São Paulo (USP). Inspired by the classic games of the Pokémon franchise, the game places the player in the role of a freshman exploring different locations and buildings of the university, with the possibility of moving around the campus either on foot or using the campus shuttle or cars.

## Justification

Many students and visitors are unaware of several areas and facilities of the USP campus, whether due to its size, the distance between units, or the lack of proper guidance.

A survey can be conducted among USP students to determine how many know about certain campus locations and how many have actually visited them. Such data may support the relevance of the project as an educational and welcoming tool.

Furthermore, studies on educational games in higher education can provide a theoretical basis for the proposal, demonstrating the potential of games as a means of learning and acclimatization to university environments.

## Objectives

- Develop a 2D game that simulates the USP campus.
- Allow the player to explore buildings, libraries, student centers, and other points of interest.
- Integrate interactive elements such as NPCs, campus shuttles, and simple puzzles.
- Promote geographical and functional knowledge of the university.

## Methodology

The game will be developed using Unity, with support for tilemaps and sprites to build the environments. The game world will include multiple floors, accessed via stairs and elevators, and interactions through dialogues and contextual events.

Features will be implemented iteratively, with feedback from real users (USP students) throughout development. Quantitative and qualitative research will be conducted to validate the need and impact of the application.

## Schedule (subject to change)

- **1st semester:** research, requirements gathering, prototyping, and first playable version.
- **2nd semester:** refinement, user testing, data analysis, and thesis writing.

## Expected Results

The expected outcome is a functional and visually attractive game capable of helping new students get acquainted with the USP campus, while also offering a fun, educational, and immersive experience.