

# Project Bellum

## Problem Statement:

People around the world have often encountered the problem of boredom. Due to boredom, many have resorted to engaging in other activities that don't benefit them as much as playing our game, "Project Bellum", such as playing other games like Bittylife Ripoff, U.B.E.T., and more. Playing other games other than Project Bellum can mess up the brain's release of chemicals, while Project Bellum fixes it and even improves brain activity and processes.

## Project Objectives:

Our project's objective is to relieve stress and cure boredom for every single individual in the world who faces the common problems of stress and boredom.

## Planned Features:

1. Being able to explore the world on foot and having the option to sprint and dash, or by using and discovering waypoints to make the process of exploration faster, just like how you teleport in other RPG games, with an open-world game like Hollow Knight.
2. Being able to open daily rewards and complete daily quests, just like in every other game, makes the player want to open the game daily and spend time actually playing the game.
3. Being able to level up and gain souls(game currency) in multiple ways, like defeating Umbras(creatures) or Ultraluxes(bosses) and catching different Umbras(creatures) or Ultraluxes(bosses) just like in Pokémon, learn different crafting recipes for better gear, and collect trophies through defeating different bosses.
4. Being able to gain souls, which is the form of currency in the game, to buy better and newer gear, buy crafting recipes, buy essentials, and other resources.

## Planned Inputs and Outputs:

1. Players will be inputting their commands on where they want their character in the game to go, and the system will output on the screen the corresponding direction where their character will move based on the input. For example, players will press D or A to move their character right or left, respectively, and the system or screen will show their character moving in the corresponding direction of the inputted command, or when players want to jump or dash, they will press

spacebar or Q, respectively, and the system or screen will output the corresponding direction of the inputted command.

2. Players will be able to input commands to open menus and initiate interactions between NPCs and objects in the game by clicking on them. When players click on NPCs or objects that are interactable, depending on the item or NPC that is, the system or screen will possibly output a menu, message prompt, or an attainment of the item clicked on.
3. Players will be able to input commands to attack NPCs when holding weapons by clicking, for example, if the player is holding a weapon and they click, they are able to use the weapon in the game and attack, they will only be able to harm NPCs if they are close enough to them but the weapon can still be used even if no NPCs are near. The system or screen will output the character holding the weapon if they are holding one, and once they click while holding it, the player will be displayed using it, depending on the kind of weapon that is.

## Logic Plan:

1. The game starts with an opening cutscene, the train dropping off the character at the first location in the game. This is made with Pygame, so we imported pygame for our code.
2. Off the bat, the player can explore the world by foot, discovering waypoints and different locations through inputting where they want to go using the keys A, D, spacebar, and Q or and the player can already try to fight and collect Umbras for souls and levelling up by inputting the action they want their character to do which is clicking and when the character is holding a weapon while clicking, the character will use it and attack whatever is near. If the player fights Umbras and collects souls and levels up, in the code, we will just increase the amount of souls they have and increase their level XP until they have enough to level up. To do this, we just have to use the pygame functions that detect key pressing and update the screen.
3. Assuming the player has some money now, has levelled up quite a bit, and has explored the world enough for now, the player can choose to continue what they're doing, do something else like fighting bigger bosses and collecting their trophies, buying new gear using souls, or crafting new gear after buying crafting recipes. In the code, what happened in the first few sections will just repeat because at the start, the player will be trying every feature, and the code for those features will just repeat, and it may just slightly vary depending on the location, difficulty, or a certain circumstance that slightly changes the repeating code for each feature.
4. After the player has done everything the game has to offer, they can choose what they want to do until they eventually beat and collect every Ultraluxe and Umbra, explore every bit of the world, get every piece of gear there is in the game, collect all trophies, and generally just max out every aspect of the game which has been the main goal from the start. In the code, this is done using lists, dictionaries, tuples, and sets.

5. Before the player would actually beat the game, the process of maxing out every aspect of the game would be repetitive because you would just fight boss after boss, hop from one location to another, collect crafting recipes one after another, and collecting boss trophy one after another, that process would just repeat until you run out of bosses to fight, locations to explore, recipes to craft, trophies to collect and eventually finish the game. In the code, again, nothing really changes besides the player's standing improving and being close to being maxed out or being maxed out already, meaning the repeating code for each feature in the game would come to a halt, and the game would be close to finishing.
6. Once the player actually finishes the game and maxes out every aspect and feature the game has to offer, they have the choice to stop playing or repeat it. Ultimately, it is up to them what they want to do.