Project Design Document

07/02/2023
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Project's idea

OOP world
In this project, there will be an explanation of Object Oriented Programming. The player can move (the camera) and interact with objects. At the top of them there will be a title in which the mechanisms of OOP are applied and then other text will show to explain some details or show example methods used. The text will be typed. Objects will be various to show as many examples as it is needed to understand the idea.

Project concept

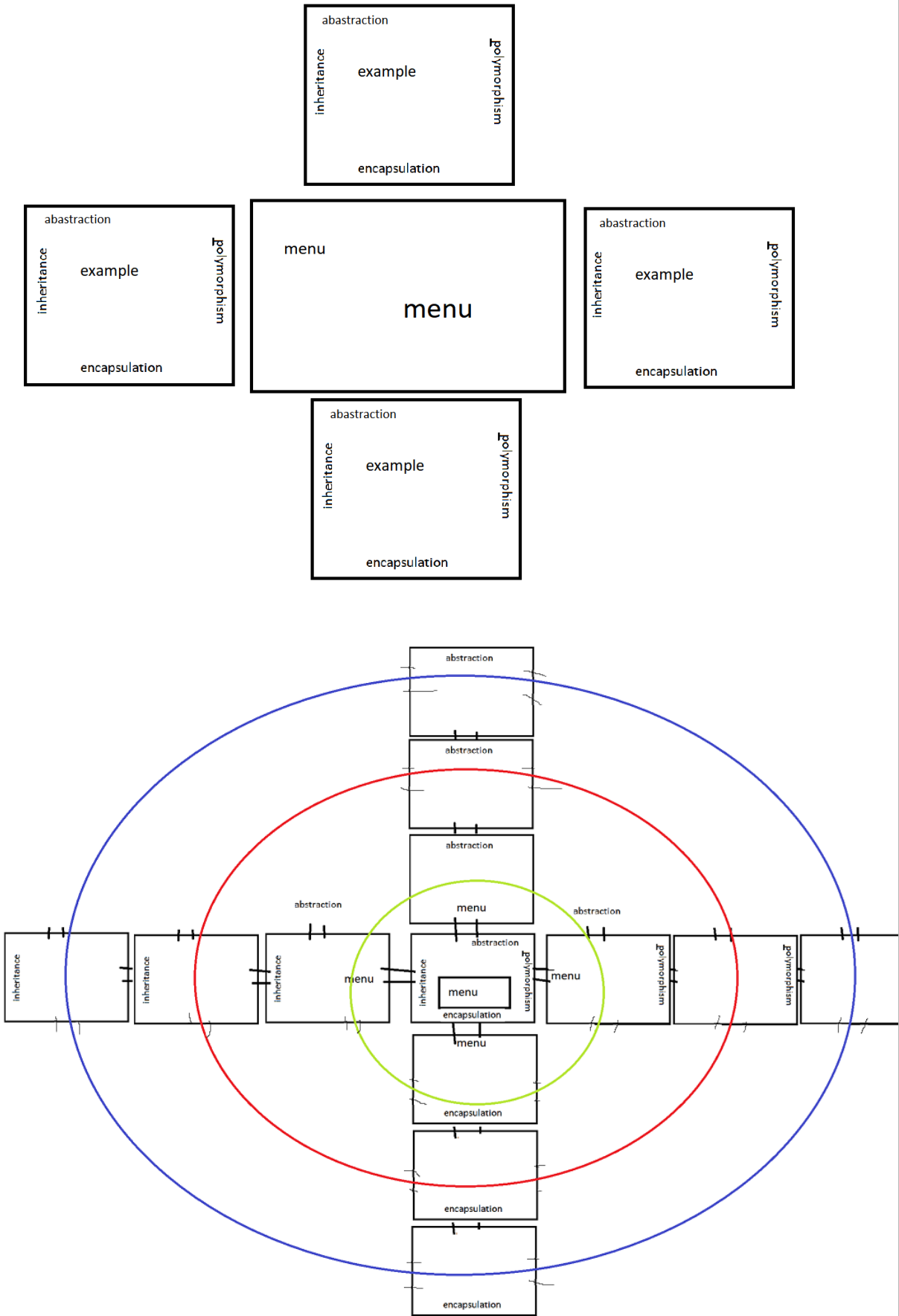|	
1 **Player Controller**	You control a player, in this first person perspective game, where w,s,a,d makes the player move in every direction. There is also mouse movement, which rotates the player to mouse position.
2 **Basic Gameplay**	During the game, the player can explore rooms to learn about OOP principles. Every room has different examples and mechanics.
3 **Sound and effects**	There will be sound effects when the player is landing on the ground from the jump. Also: -Eating fruits. -Sound of speakers. -Move from the heavy cube. -Animals' sounds -Vehicles' sounds
4 **Gameplay mechanics**	As the game progresses, *more examples of OOP user will explore.* [*optional*] There will also be rooms in which the player has to decide which principles of OOP are being used.
5 **User interface**	Main menu option : Start, Exit, Information (about and idea etc) On the escape, pause menu: Menu, Exit
6 **Other features**	*Any other notes about the project that you don't feel were addressed in the above.*

Project Timeline

Milestone	Description	Due
#1	- Create an environment (world, player, movement, walls, schema of rooms) - Create a parent class: Fruits and child classes: Apple, Orange, Banana,	07/02
#2	- [Fruit] Rooms, description, explanation - Concept of full world	08/02
#3	- [Furniture] objects, interact with speaker, move the object, turn on, turn off the sound of speaker - Make a player interact with seatable objects (seat and move functions) - Turn off and on the light - Push on mouse	14/02
#4	- [Animals] - Random movement, move to the flower, eat the flower - Methods: move, rotate, jump, eat	27/02
#5	- [Vehicles] - Methods: move vehicle, get in, get out	09.03
Backlog	- Sounds	31/03

Project Sketch

abastraction
inheritance
example
polymorphism
encapsulation

abastraction
inheritance
example
polymorphism
encapsulation

menu

menu

abastraction
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Project Brainstorm

- *Menu → room with every rule explained*
- *Menu → room with only one rule (with portals)*
- *Room with an example of using these methods in practice. "Fruit room" will have a kitchen?*
- *Rooms in which the player has to decide which principles of OOP are being used.*
- *Reset button to reset the examples (eg. eaten fruits)*

Project Concept Level

- *Menu*

The main room which is a corridor between rooms and has general knowledge about OOP

- *Fruit room (apples, bananas, orangers...)*

User can go to the interactable fruits and can eat them. Show methods like: eat, display text, show color

- *Animals room (cat, dog, chicken)*

User see how animals behave and this is how some methods are applied and inherit - walk, sound, eat

- *Furnitures room (sound, heaviness)*

- *Vehicles (boat, helicopter, car)*