***GAME DESIGN PLAN***

***(Title)***

*IDEA*

A ball will be there that will keep on bouncing from the obstacles around the play area and damage the damageable objects in the level .

Goal is to score as highest as possible in say 2 minutes.

THEME

Lets make a list of themes that could be possible to make:

• Neon themed play area

• Ocean / Beach themed play area

• Space themed play area

• Forest themed play area

• Cold mountain themed play area

Elements

• Pyro

• Cryo

• Electro

• Anemo

• Hydro

• Geo

• Dendro

Elemental Reaction Compatibility

• Pyro : { Cryo , Electro , Anemo , Hydro , Geo , Dendro }

• Cryo : { Pyro , Electro , Anemo , Hydro , Geo }

• Electro : { Pyro , Cryo , Anemo , Hydro , Geo , Dendro }

• Anemo : { Pyro , Cryo , Electro , Hydro }

• Hydro : { Pyro , Cryo , Electro , Anemo , Geo , Dendro }

• Geo : { Pyro , Cryo , Electro, Hydro }

• Dendro : { Pyro , Electro , Hydro }

Reaction Name and Related Damage

1 : Pyro + Cryo = Melt , 35

2 : Pyro + Electro = Overload , 65

3 : Pyro + Anemo = Swirl , 25

4 : Pyro + Hydro = Vaporize , 75

5 : Pyro + Geo = Crystallize , 50

6 : Pyro + Dendro = Burning , 35

7 : Cryo + Electro = Super Conduct , 45

8 : Cryo + Anemo = Swirl , 25

9 : Cryo + Hydro = Frozen , 15

10 : Cryo + Geo = Crystallize , 25

11 : Electro + Anemo = Swirl , 25

12 : Electro + Hydro = Electro Charged , 45

13 : Electro + Geo = Crystallize , 25

14 : Electro + Dendro = Quicken , 65

15 : Anemo + Hydro = Swirl , 25

16 : Hydro + Geo = Crystallize , 25

17 : Hydro + Dendro = Bloom , 100

Mechanics

All the time the physical damage is active , along with it the ball or the obstacles could have an elemental state as well.

1. *Ball Related* -

• Ball will be initially at normal/neutral physical state.

• When the ball hits any specific obstacle then it will be excited to an elemental state if that obstacle have any elemental state.

• To show that ball is excited to a specific elemental state , we can give some glow of a specific color , spreading some particles etc.

• When the ball gets touched with another element when the ball already have one then as per elemental reaction , the ball will glow in 2 different colors , spreading particles, ribbons etc along with buffed damage. Say when ball contains 2 elements within then once it hits some other obstacle it go back to neutral state.

• Overall, ball will have neutral state (base dmg) , excited state (base dmg) , second excited (buffed dmg).

• Ball won’t die , rather it can go out of play area and will be summoned again on the moving paddle and can be launched. There won’t be any limited number of spawning of this ball.

• Simply ball will send its energy to other elements based on if the other element can accept energy or element. Here, energy means damage based on excitation or neutral state of ball . If ball hits the paddle then only element can be transferred.

|  |  |  |
| --- | --- | --- |
|  | Obstacle Neutral | Obstacle State |
| Ball Neutral | Deliver Damage | • Deliver Damage  • Ball will Jump to state 1 copying obstacle state |
| Ball State 1 | Deliver Damage | • If os == bs then deliver damage  • if os != bs then ball will jump to second state and deliver buffed damage |
| Ball State 2 | Deliver Damage | •If any bs == os then deliver buffed damage  • if any bs != os then deliver buffed damage and ball will jump back to neutral state |

1. *Obstacles related* -

• Moving damageable , we will represent the current health points by showing cracks in the mesh.

• Moving damage immune , a special kind of mesh that can not be damaged and inhibit the ball movement either by changing its direction or slowing it down

• Fixed damageable , we will place some obstacles which will be fixed in their position and can be damaged , it could be a wall of the play area or in some between the play area

• Fixed damage immune will be highlighted in some sort of special mesh or position and its work is to simply change the direction of the ball

• Obstacles will only receive damage and their original state wont be changed for their lifetime. When they got hit with the ball of any state (1 or 2) then as per the reactions table of interaction the damage will be delivered.

1. *Level related* -

• A 2.5D kind of level where player character will be a paddle , can be moved forward, backward , left and right.

• There will be other level aesthetics , beyond the play area to cover the rest of the screen.

• VFX could be simple say raining , ice cold , forest type , or some sort of mine related , etc . Depending on the restriction of what could be made on time.

1. Paddle -

|  |  |  |  |
| --- | --- | --- | --- |
|  | Ball Neutral | Ball First Excite | Ball Second Excite |
| Paddle neutral | --- | Paddle copy ball state and ball wont jump to neutral | Paddle copy any of the ball’s state (there are 2 states in ball so pick any random). Ball wont lose its energy and only the element of the paddle will be changed |
| Paddle State | Ball will jump to state 1 | If both ball and paddle are on same state then nothing will happen . Else paddle will go back to neutral and ball jumps to second state | If any state of ball is same as paddle then nothing will happen . Otherwise paddle state will update randomly based on ball’s state. |

Music

• On hit , on state excitation , on jumping back to neutral there will be some audio depicting it.

• On beginning of the level the music will start playing that could be paused when pause menu is on.

• On breaking of obstacle there will be some audio

• On any menu screen , there will be some audio

• On time up there will be some audio

• On selecting, on some option or any button , there will be some audio

Playable Area Fixed Specifications

The area will be in form of similar to a chess piece board , each unit of this board will contain some kind of obstacle or maybe left as it is .

1. Boundary Wall -

It will be of size greater than playable area , say playable area is of 7:7 then fixed walls will be of 9:1 , thickness of these walls could be same say 100 UE4 units or something similar.These walls could be of hybrid type i.e. some portion of it is damageable and some is immune to create some sort of opening to accidentally let the ball go beyond the area.

1. Obstacles -

These could be of size 4X4 , 2X2 , 7X1 , 4X1 , We can decide their dimensions later on . Obstacles will be having some different color of meshes to represent what state they are in as default. As they receive damage , cracks in the mesh start to appear and score will update based on dmg received.

1. Ball -

It could be any small size visible properly from the viewport since game is going to be 2.5D type I.e. camera will be above the playable area so ball should be visible from above .

1. Paddle -

Paddle will be of fixed size say 4X1. Can be moved in front , back , left and right directions . It will deflect the ball and can also summon it when it goes out of the playable area. On difficulty basis the size of paddle will increase or decrease (if hard then small if easy then big). It will update its state based on ball state.