



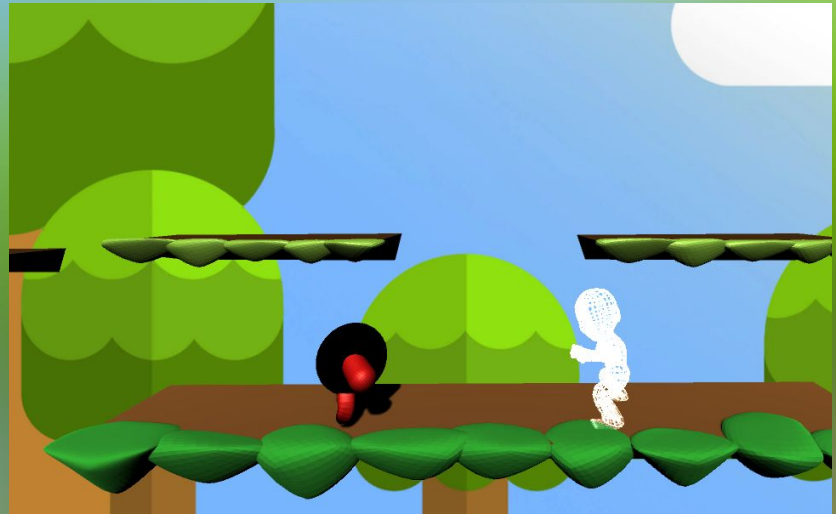
Final Presentation

group GD03

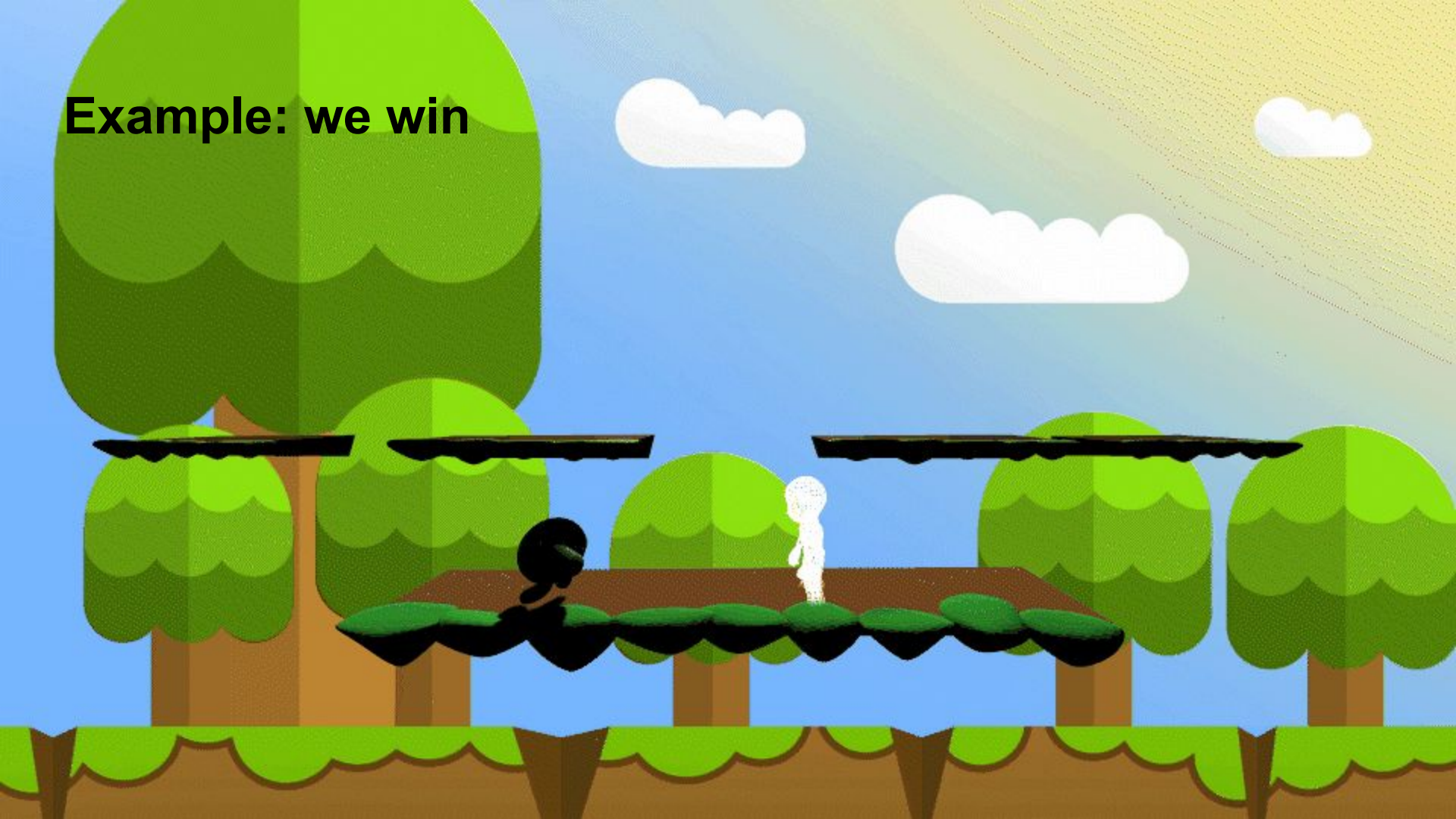
Bas
Hashim
Aleksander
Vincent
Simon

Our game: Beat & Boost

- Platform fighting game
- Different rounds, 2 players
- Power-ups



Example: we win

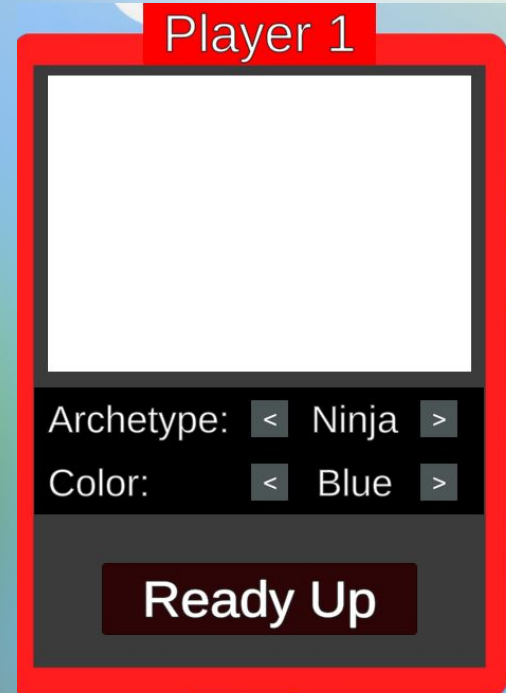
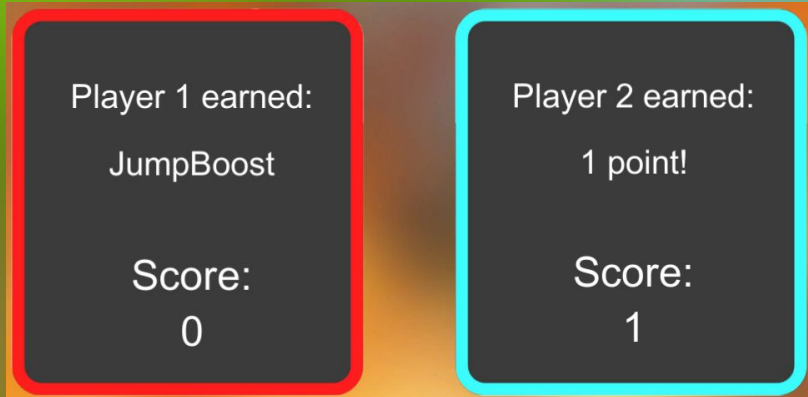


Example: we lose



Technical challenging aspects and approach

- Local Multiplayer
- Combat system, Power-ups and Archetypes
- Artificial Intelligence
- Analytics



Movement & Combat Systems

Movement:

- Air movement
- Dashing
- Multi Jump

Combat:

- Punch & Kick
- Block
- Knockback

Archetypes

- Combat Stats
- Movement Stats

```
1 reference
public int archetypeID { get; set; }
5 references
public float defense { get; set; }
4 references
public int punchDamage { get; set; }
4 references
public int kickDamage { get; set; }
2 references
public float blockReduction { get; set; }
5 references
public float maxSpeed { get; set; }
5 references
public float jumpForce { get; set; }
5 references
public int maxJumps { get; set; }
```

Currently:

- Brawler
- Glass-cannon
- Ninja
- Tank

```
1 reference
public Archetype Brawler(int id)
//Stats for brawler Archetype
{
    Archetype Brawler = new Archetype(id);
    Brawler.punchDamage = 50;
    Brawler.kickDamage = 40;
    Brawler.jumpForce = 6f;
    Brawler.maxJumps = 2;
    Brawler.maxSpeed = 3;

    return Brawler;
}
```

Power-Ups

- Archetype specific
- Max Stacks
- Drop rates

```
1 reference
public PowerUp(int index, string name, int mS = 1, int w = 1)
{
    powerUpIndex = index;
    powerUpName = name;
    maxStacks = mS;
    weight = w;
    compatibleArchetypes = Archetypes.getArchetypeIndexList();
}
```

Currently:

- JumpBoost
- SpeedBoost
- BlockBoost

```
1 reference
public PowerUps()
{
    list = new List<PowerUp>();

    //create PowerUps here
    list.Add(powerupTemplate("JumpBoost", w: 4, mS: 4, blacklist:new int[]{2, 3}));
    list.Add(powerupTemplate("SpeedBoost", w: 6, mS: 3));
    list.Add(powerupTemplate("BlockBoost", w: 3, mS: 5));
}
```


Remote DataBase

- MariaDB database running on a remote server
- Managed with backend PHP scripts
- Analytics & data is collected during the session
- Data is sent after each session
- Separate data entry per session



```
1 <?php
2 $servername = " ";
3 $username = " ";
4 $password = " ";
5 $dbname = " ";
6
7 // Create connection
8 $conn = new mysqli($servername, $username, $password, $dbname);
9
10 // Check connection
11 if ($conn->connect_error) {
12     die("Connection failed: " . $conn->connect_error);
13 }
14 echo "Connected successfully";
15 $sql = "INSERT INTO Session_stats(P1_Atk, P2_Atk, AI_Atk, P1_Hit, P2_Hit,
16     if ($conn->query($sql) === TRUE)
17     {
18         echo "New record created successfully";
19     }
20     else
21     {
22         echo "Error" . $sql . "<br>" . $conn->error;
23     }
24 }
25 $conn->close();
26 ?>
```

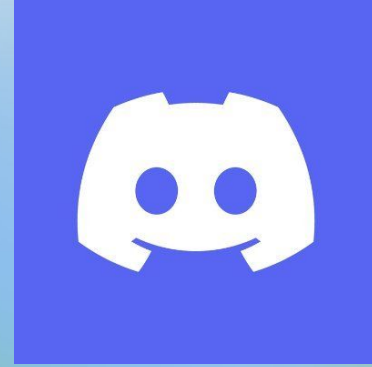
SessionID	P1_Atk	P2_Atk	AI_Atk	P1_Hit	P2_Hit	AI_Hit	P1_Jump	P2_Jump	AI_Jump	No_Round	No_Matches	P1_Wins	P2_Wins	Rnd_Time	Avg_RTime	Total_time	Longest_Rnd	Shortest_Rnd
1	76	43	0	43	76	0	104	58	0	10	2	2	0	00:00:34	00:00:28	00:04:49	00:01:01	00:00:11
2	39	0	54	54	0	39	62	0	35	7	1	0	1	00:00:21	00:00:27	00:02:15	00:00:43	00:00:16

Playtesting & Feedback

- Distributed game among friends
 - Just play it, writing down bugs
- During LAB sessions playtesting
- Feedback → Issues on Git

Process

- Discord, Whatsapp
- Weekly sprint meetings
- LAB sessions on campus
- Issues board GitLab





**Thanks for
listening!**

Beat & Boost by GD03

Play Our Game



Questions



Answers