**UNITY PLATFORMER**

*Setting up:*

1. Extract “Project.rar”  
2. Open file “Project” as a new unity project  
3. Select version of unity shown in the project

*Related to the game:*

Description

It’s a simple platformer game. There are 4 available characters. Mario, Sonic, PacMan and Pikachu from the well known games. Related to the game levels, there are 4 available worlds (1 for each player) with 4 levels in each world. There is a HealthBar indicating the HP of the player. The initial HP is 100, if a player dies he respawns either in the beginning of the level or the checkpoint flag if he has triggered it. Depending on the level there is a higher number of power ups and enemies of world the level belongs to. The last level of each world is the boss level of the world. The bosses of each world are Bowser, Robotnik, Spooky and Deoxys (corresponding to the players’ sequence). In the game you can collect coins either from the ground or from the Question Boxes containing them. In some Question Boxes power ups can be found. Some powerups can be picked up by a specific player. Mario can pick up the Red Mushroom and the Fire Flower, Sonic can pick up the Shield and the Blue Mushroom, PacMan can pick up the Cherry and the PacMan powerup and Pikachu can pick up the Rare Candy and the Thunder Stone. Το game starts with Mario and level 1-1 unlocked. Every time a level is completed the next one is unlocked. Every time a boss level is completed the character of the next world is unlocked. The boss levels are 1-4, 2-4, 3-4, 4-4. Every boss can be beaten only by the player of the current world. All of the players have the ability to double jump. **Buttons:** arrows to move, space to jump, Enter to interact with pipes and doors, if you have picked up the Fire Flower or the Thunder Stone you can shoot upwards pressing down the up button and the X button, if you want to shoot right or left you press the X button, you can sprint holding down the Shift button, you can zoom out with the O button and zoom in with the I button.

Players  
Mario  
A picture containing text, vector graphics

Description automatically generated  
Sonic  
A picture containing text

Description automatically generated  
PacMan  
A picture containing text, traffic light, sign

Description automatically generated  
Pikachu  
A picture containing toy

Description automatically generated

PowerUps

Red Mushroom -> Increases the jump of Mario for 20 seconds

A picture containing text, first-aid kit, toy, vector graphics

Description automatically generated

Fire Flower-> allows Mario to shoot fire balls(2 sec timer)

A picture containing chart

Description automatically generated  
Blue Mushroom-> Makes Sonic faster for 20 seconds  
A picture containing text, clipart, vector graphics

Description automatically generated  
Sonic Shield-> Gives sonic immunity to the next 3 hits

A blue planet in space

Description automatically generated with low confidence  
Cherry-> Makes PacMan faster and increases his jump for 20 seconds

A picture containing text, vector graphics

Description automatically generated

PacMan PowerUp-> allows PacMan to eat ghosts (the red, blue, orange, mauve and pink ones) and to hit Spooky for the next 10 seconds

Shape, circle

Description automatically generated  
Rare Candy-> Makes Pikachu faster and increases his jump for 20 seconds

A picture containing weapon

Description automatically generated  
Thunder Stone-> Allows Pikachu to shoot electro balls(2 sec timer)

A picture containing text, sign

Description automatically generated

Bosses  
Bowser (1-4)-> Chases you, shoots fire balls he jumps and when he lands there is an earthquake that stuns you if you were on the ground , he cannot be killed, to be beaten you have to reach the end of the level

A picture containing text, clipart

Description automatically generated A picture containing plant

Description automatically generated

Robotnik(2-4)-> Flies right and left, falls and shoots bullets, goes back up and comes down to hit you, he spawns Buzzbombers in intervals, he receives damage when you jump on him, his HP is 3  
A picture containing text

Description automatically generated A picture containing projector

Description automatically generated  
Spooky(3-4)-> Moves right and left and has a melee attack, one that shoots blue fireballs that follow you and one in which blue fireballs are falling from the sky (if his HP is under 2), in intervals he drops pacman power up and if PacMan touches him while it’s active he receives damage, his HP is 3  
A picture containing toy

Description automatically generated A picture containing text, night sky

Description automatically generated   
Deoxys(4-4)-> Moves left and right and flies, his first attack is shooting electro balls, another one is aiming at you and causing an explosion , another one that creates an earthquake (if he’s below 150 HP) and one where he moves very fast (if he’s below 100 HP), in total he has 200 HP and can be killed by shooting electro balls at him with Pikachu using the Thunder Stone, every electro ball causes a damage of 10 HP   
A picture containing text, tool, doll

Description automatically generated A bright light in the dark

Description automatically generated with medium confidence A picture containing text

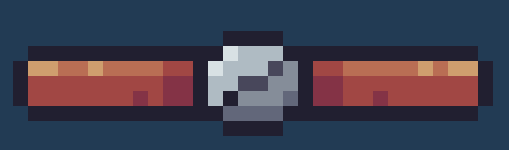
Description automatically generated A picture containing logo

Description automatically generated A picture containing text, clipart

Description automatically generated

Flags  
CheckPoint Flag-> If a player dies and it has been triggered then the player respawns   
Shape

Description automatically generated  
Ending Flag-> If it’s triggered the next level is unlocked and the player is headed back to the level menu

Platforms/Blocks/Traps  
Platform-> Transports the player  
  
QuestionBox-> Is triggered when the player’s head touches it from below and it contains either a coin or a powerup  
A picture containing icon

Description automatically generated  
Box  
A picture containing text

Description automatically generated  
Brick-> Breaks by an explosion  
A picture containing diagram

Description automatically generated  
Saw Blade  
Chart, histogram

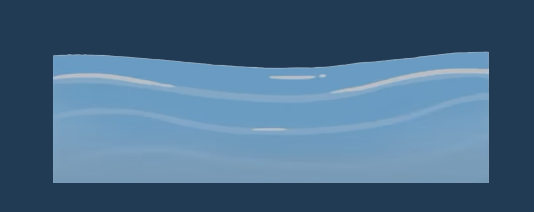
Description automatically generated

Spikes  
A picture containing logo

Description automatically generated  
Fire Trap-> Shoots fire in intervals  
Shape

Description automatically generated  
Trampolines-> Boosts player’s jump  
Icon

Description automatically generated  
Falling Tile-> If the player stays on it for long it drops  
Logo

Description automatically generated  
Water-> They player swims in it (gravity is adjusted)  
  
Lava-> Kills the player  
A red and yellow flag

Description automatically generated with medium confidence  
Bowser Door-> Enter to use the door  


Enemies  
Goomba-> Moves right and left   
A close-up of a toy

Description automatically generated with low confidence  
Green Koopa-> Moves right and left, if you jump on him he goes into his shell, if you touch the shell it’s in motion and kills enemies or causes damages to you if touched  
A picture containing text, clipart

Description automatically generated Logo

Description automatically generated with medium confidence  
Red Koopa-> Same as the Green Koopa, doesn’t fall from platforms  
A close-up of a toy

Description automatically generated with medium confidence Logo

Description automatically generated  
Hammer Koopa-> Moves right and left, doesn’t fall from platforms, throws hammers  
A picture containing toy

Description automatically generated   
Flying Koopas-> Flies and if they touch the terrain the lose their wings  
A picture containing text, clipart

Description automatically generated A picture containing text, clipart

Description automatically generated  
Lakitu-> Flies around the player and throws Spinies or does a melee attack, if you just on him the cloud is left  
A picture containing clipart, window

Description automatically generated A picture containing text

Description automatically generated  
Spiny-> Moves left and right and you can’t jump on him  
A picture containing text, toy, doll, outdoor object

Description automatically generated

Boo-> Moves towards the player if you look to the opposite side of him

A picture containing text

Description automatically generated

Bomb-> When approached it moves faster and after a while explodes, if you jump on him he stops moving  
A close-up of a camera

Description automatically generated with low confidence  
Bullet-> Flies and can pass through terrain  
Logo

Description automatically generated  
Lava Bubble-> Goes up and down, appears through the lava  
A picture containing text

Description automatically generated  
Magician-> If player is close, he stuns him or spawns goombas or activates his shield  
A picture containing text

Description automatically generated  
Piranha Plant-> appears from the pipe

A picture containing text

Description automatically generated

Thwomp-> When the player is below him he drops  
A picture containing text

Description automatically generated

Buyoon-> Moves left and right, if you jump on him he gets shorted and then grows taller again after a while  
A picture containing text, clipart

Description automatically generated  
Buzzbomber-> Flies, if the player it close he follows him  
  
Coconuts-> If player is close he shoots bananas, if player is very close he does a backflip to get away  
  
Condorbomber-> If player is close it follows him and if he touches him or a wall he explodes, while it follows the player it shoots bullets

   
Croakoid-> If player is close it jump towards him  


Flybot-> It flies horizontically, if player is below it he drops and explodes

  
Mechanibass-> Swims in zig-zag patters  
  
Moletank-> Waits for the player to approach and appears through the terrain  
A picture containing text

Description automatically generated  
Black Ghost-> Follows the player if he is close and it cannot be killed  
A picture containing text

Description automatically generated  
Blue,Red,Orange,Pink,Purple Ghosts-> they stun you if you look at them, spit on you and become invisible for intervals (each ghost has unique combination of the above)  
A close-up of a toy

Description automatically generated with low confidenceA picture containing text, clipart, doll

Description automatically generatedA picture containing clipart

Description automatically generatedA picture containing text, doll

Description automatically generated A picture containing text

Description automatically generated  
Dark Ghost-> It remains invisible, if player is nearby he reveals himself and chases the player, goes through terrain  
A picture containing text, clipart

Description automatically generated

Dark Ghost Baby-> It remains invisible, if player is nearby he reveals himself and chases the player, doesn’t go through terrain and on physical touch it explodes  
A picture containing text, clipart

Description automatically generated  
Slime Ghost-> glides on platforms  
A picture containing text

Description automatically generated  
Blastoise-> Moves left and right, if the player is close water balls  
 A picture containing text, wheel, night sky

Description automatically generated  
Butterfree-> Remains in the air, if the player is close it flies towards him and throws dust that stuns the player if it touches him  
A picture containing spider, window

Description automatically generated Icon

Description automatically generated with medium confidence  
Charizard-> Waits, if it sees the player it flies towards him and uses the flamethrower

A picture containing text

Description automatically generated A picture containing star, outdoor object, plant

Description automatically generated  
Gengar-> Moves left and right, if it spots the player he teleports next to him and spawns 3 clones of itself, they clones cannot inflict damage, after a while they disappear and the real Gengar spits towards the player  
A picture containing text

Description automatically generated A picture containing text

Description automatically generated A picture containing bubble chart

Description automatically generated  
Diglett-> Goes above and below the ground in intervals, if the player is close it moves faster, if the player jumps on it it goes faster  
  
Graveler-> Waits, if the player is close he creates ground cracks towards him  
A picture containing text, frog

Description automatically generated A group of jets flying in the sky

Description automatically generated with low confidence  
Snorlax->κοιμάται, αν κάνεις interact μαζί του ξυπνάει και σε κυνηγάει  
A picture containing text, dark

Description automatically generated A picture containing graphical user interface

Description automatically generated  
Scyther-> If you go close enough it starts chasing you and if it touches you it also dies  
A green spider on a blue background

Description automatically generated with low confidence  
Cannibal-> Moves right and left, if he touches the whole it slides back and gets dizzy, after he recovers he moves to the opposite side

A picture containing text

Description automatically generated

Animations και Menus  
Main Menu (initial scene)-> If you select “Play” you get to the Level Menu, if “Options” is selected you get to the Options Menu, if “Quit” is selected the game terminates  
A picture containing timeline

Description automatically generated  
Options Menu-> Offers the option for the user to enable/ disable sounds, use cheats that make him invincible and offer him unlimited double jumps, reset game data or go back to the main menu by selecting “Back” or by pressing “Escape”  
Diagram

Description automatically generated  
  
Level Menu-> This is where you can select the level you want to play, each world has the appropriate animated background  
A picture containing diagram

Description automatically generatedDiagram

Description automatically generated  
A picture containing text

Description automatically generatedA picture containing text, flying

Description automatically generated  
Select Player Menu-> This is where you can select the player, the available ones are coloured

Application

Description automatically generated with medium confidence  
Escape Menu-> The menu can be showing if you press “Escape” while you are in a level  
Diagram

Description automatically generated  
Unlocking Player Animation-> when a player is unlocked after a boss fight (if he’s not already unlocked) an animation of the player running from left to right of the screen is displayed

Coin System-> You can purchase new players using coins from the player menu

Player Data  
The data of the game is saved in PlayerData.json, ‘y’ represents “Yes”, ‘n’ represents “No”, the index of the level (reachedLevel) is the real index of the level minus 1, meaning if level 1-1 is the only level unlocked then the reachedLevel variable is “0”, if every level is unlocked the reachedLevel variabel is “15”   
A screenshot of a computer

Description automatically generated with medium confidence  
Shape, rectangle

Description automatically generated

Project sources  
All the game objects/ prefabs can be located in Prefabs and Resources folder, some were created by me but were never used and that’s why they are not in the report. The Scripts folder contains all the C# scripts, the Fonts folder contains the fonts, the Sounds folder contains the sounds effects and the used music, the Scenes folder contains all the project scenes. The rest of the folders contain sprites, animations etc, some things that exist haven’t been used. All the sprites and the music and sound effects where obtained from the Internet and I don’t in any case own the copyrights. Some of the assets have been adjusted to the game’s requirements.

Bugs and things I didn’t have time to work on  
Unfortunately I didn’t have the time to create a market for the player to buy powers ups (used from the player’s inventory). I also didn’t have time to create a timer indicator for the power ups. This was a very big game to develop in such a small time frame. I was the only person developing it and had no prior experience in unity. There is for sure going to be bugs. I hope you understand. Enjoy!

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