Gameplay analysis of:

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01_Game overview:

The goal of the game "Super Mario 64" is to save the kidnapped princess of the Mushroom Kingdom - a surreal cartoon land - and to get to eat a cake she baked for you.
To do so the player needs to collect magic stars within different pictures – levels – in the castle –the hub world- to unlock further progress until he/she reaches Bowser – the kidnapper of the princess. These stars are surrounded by various obstacles and enemies. The player can run and jump to avoid those. If he/she still gets hit he/she loses some health. When the health bar drops to zero or the player falls into a bottomless pit he/she loses one life and has to restart the level all over again.

Flowchart of overarching gameplay loop:
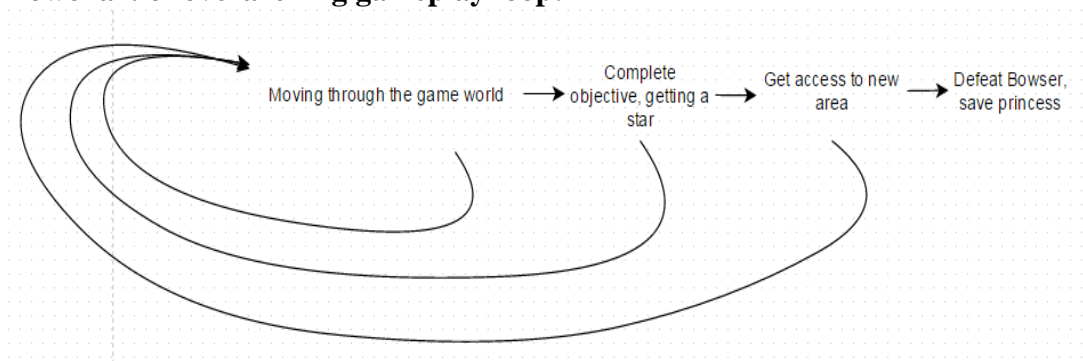
02_Description of gameplay:

By far the most recurring action of the player will be to jump on or off platforms. In the 2D prequels of the series it was also the main action to avoid or defeat enemies but with the addition of the 3rd dimension most of the times it is - even though still possible - easier just to steer Mario around them.

Knowing this the designers decided that even the very first enemy would spawn a coin- which refills health among other benefits- after being defeated so that the player has an actual incentive to engage in battle with them.

The very open nature of the game accommodates many different play styles and the above is just one of many examples of situations in which it is completely up to the players decision how he/she's going to approach it.

You can collect up to seven stars per level but only one at a time. So the player would have to visit one level several times to collect all of them. With that in mind the designers went to great lengths to make each level as enjoyable for replay sessions as they could by allowing the player many different routes to traverse each of them. To avoid confusing the player by giving him/her so many options they repeatedly use clever placement of coins to lead him/her in the right direction.

Most of the time the player can collect those stars within the level in any order he/she likes and never needs to collect all of them to advance to the next level. In that way the designers make sure that the harder levels are just unlocked later in the game but the player has still plenty of room to explore the levels own his own in any order he/she likes.

02_Level Dramaturgy

While there is little story in the game overall often stages still have some kind of a dramaturgy. In more than one level you start at the relatively save bottom of a mountain or structure you have to ascend in order to take down a boss enemy. The Bowser boss stages take that even one step further: they are in contrast to all the other levels completely linear and Mario always has to move in one direction which allows the gameplay to gain pace fitting the pace of the story right before Mario has to face off versus Bowser.

Level beat chart:

	Bob-Omb Battlefield	Whomp's Fortress
Mechanics	Cannon, Wing Cap	Cannon, moving platforms
Enemies	Goomba, Bob-Omb, rolling Boulders	Whomp, Thwomp, Bomp, Piranha Plants
Color Mapping	Brown/Green	Blue/Grey

03_Level Design

The idea to let the actual gameplay happen in separate enchanted pictures that can be found everywhere in the castle is a great excuse to make the player visit deserts, water worlds, snow lands and much more. Because of these different themes each level feels unique and separated from the rest even though they still show consistency in style. That combination makes the player feel more like he/she is visiting different places but not different worlds.

Usually at the start of a level Mario gets dropped into the relative save middle of a level area. From there he can go anywhere he wants but the further away he gets from that starting point the more dangerous the enemies and obstacles become.

Combined with the aforementioned restriction that you can only collect one star at a time this leads to an almost perfect difficulty curve: the player starts at an easy part of the level, then the further he gets into it in search of the stars the harder it becomes and after he hit the hardest spot he gets to relax again a bit when he restarts the level but the next star is leading him even further down the level structure.
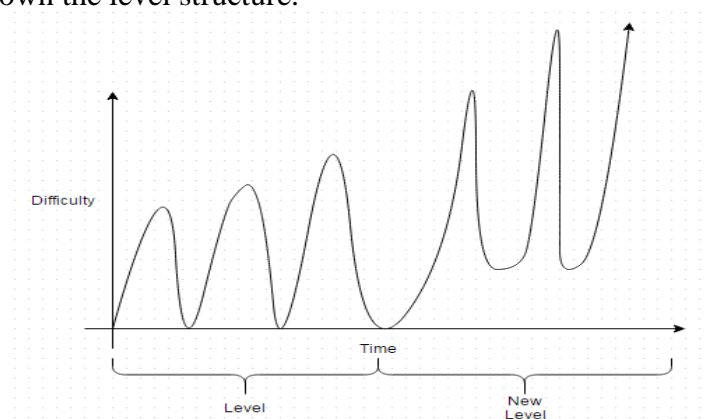
04_Pacing:
The player starts in the first area, which has the function to explain the basic control scheme via signs. According to this and the premise that the game is more like an open world, the pacing in the introducing area is slow. But it depends surely from player to player. You could read every tutorial sign and explore the area, but it isn't necessary.

In the first official level the same concept is taken. You get introduced to several game mechanics, but because of the existence of enemies in this area, which attack you after you enter their sight, the gameplay speeds up. In between jumping puzzles there are some platforms, where the player is safe and can rest for a while, to observe the environment. Because the second level starts in the same way as the areas before with tutorial messages and continues with exploration and action alternating, the pacing appears more dynamic. Especially when tutorial textboxes appear on the screen the player gets the time to coordinate. Since the levels start with the same concept and open up for exploration, it fits the lighthearted and special atmosphere and environment of the Super Mario World. Props and geography are building and stacking up aside from the vast area structure, and alternate between different game mechanics. For example, the introduction area takes the form of a courtyard of a castle and mixes typical structures with fitting game mechanics. You got trees, hills, pathways, a moat and a small lake – altogether explaining the basic movement options of the character while exploring. In the first level then, the player encounters typical Super Mario props like floating platforms, boulders, rocks, blocks and additionally his well-known standard enemies.

05_Description of interaction concept & player feedback:
Although Super Mario makes no sense in any way, the character of Mario fits into the style and environment of the game world. His abilities are predestinated to take advantage of the game design, and his lighthearted "personality" – if you will – delivers the atmosphere and the thought behind the game perfectly.

Since Mario is able to grab, punch, slide and duck, there are multiple ways of interacting with the game worlds objects. So he can punch and grab and throw enemies, crush blocks, grab edges to pull himself up and slide downhill to enlarge his speed. Additionally he can talk to NPCs and read signs.

Counting the most important assets, there are a lot of different ones.

Coins – for Highscore, healing and gathering Life-Ups
Red Coins – for unveiling secrets in a level

Hearts – for healing

Stars – for getting access to new levels

Mushrooms – for Life-Ups

Wing Cap - allows Mario to transform into Wing Mario and fly around if he performs a triple jump or blasts out of a cannon. This is useful for reaching high or far areas, and finding secrets in the sky. Also, the Wing Cap lets Mario do a Triple Jump without having to walk/run.

Vanish Cap - makes Mario transform into Vanish Mario which makes him invulnerable to attacks. He can also walk through some walls to reach new areas, where he can find hidden items or Power Stars. Also, all enemies' attacks travel through him.

Metal Cap - causes Mario to transform into Metal Mario, which makes him metallic and heavy. This lets Mario defeat enemies by walking into them, walk through streams of fire without taking damage, avoid water currents, and walk under water. Because of his weight, all Mario can do in this form is walk and jump.

Altogether they complement the game flow and make sure, that the player won't face unfair situations. While Coins are placed to guide the player through the level, Red Coins, Mushrooms and Stars have to be gained via dexterity. Power Ups – the different caps - are most likely placed so that the player can reach them easier. They are not always necessary to succeed, but make the task easier.

Through level design as well as textboxes on signs, the player gets to learn the mechanics of the game. At the same time fitting sounds occur if the player gains achievements, power-ups and collectibles, or hit by enemies. If he makes a mistake, runs in enemies or falls of an edge, his health is decreasing until its zero. When this happens, the player dies, loses one life and starts anew. But are all the life-points gone, the game is over and the save game has to be reloaded.

Because of the existence of coins, power-ups and the open-world-concept of the game, the player is always motivated to return to the games world. Additionally there are especially

challenging levels, which you can only get by collecting all the hidden stars in the game. Motivation is guaranteed.

06_Final analysis and game critique:
Since Super Mario always existed for being an entertainment product and an example of complementing game mechanics, we can say – according to our experience with several Mario games – it has got one of the best level structures of the series. Its self-explanatory, has got an alternating pacing and a motivational design overall. In addition, the timeless fantasy world and funny, lighthearted atmosphere make sure, that the players will most likely return from time to time to this game world to enjoy it all over again.
But after all, there is no game without some flaws. So we noticed very strong the sometimes really slippery movements of the character, which made some jumping passages unnecessarily difficult, and the non-adjustable camera. Improvements in this case had to be made. But the player will surely get used to it, as we did.