Donkey Kong
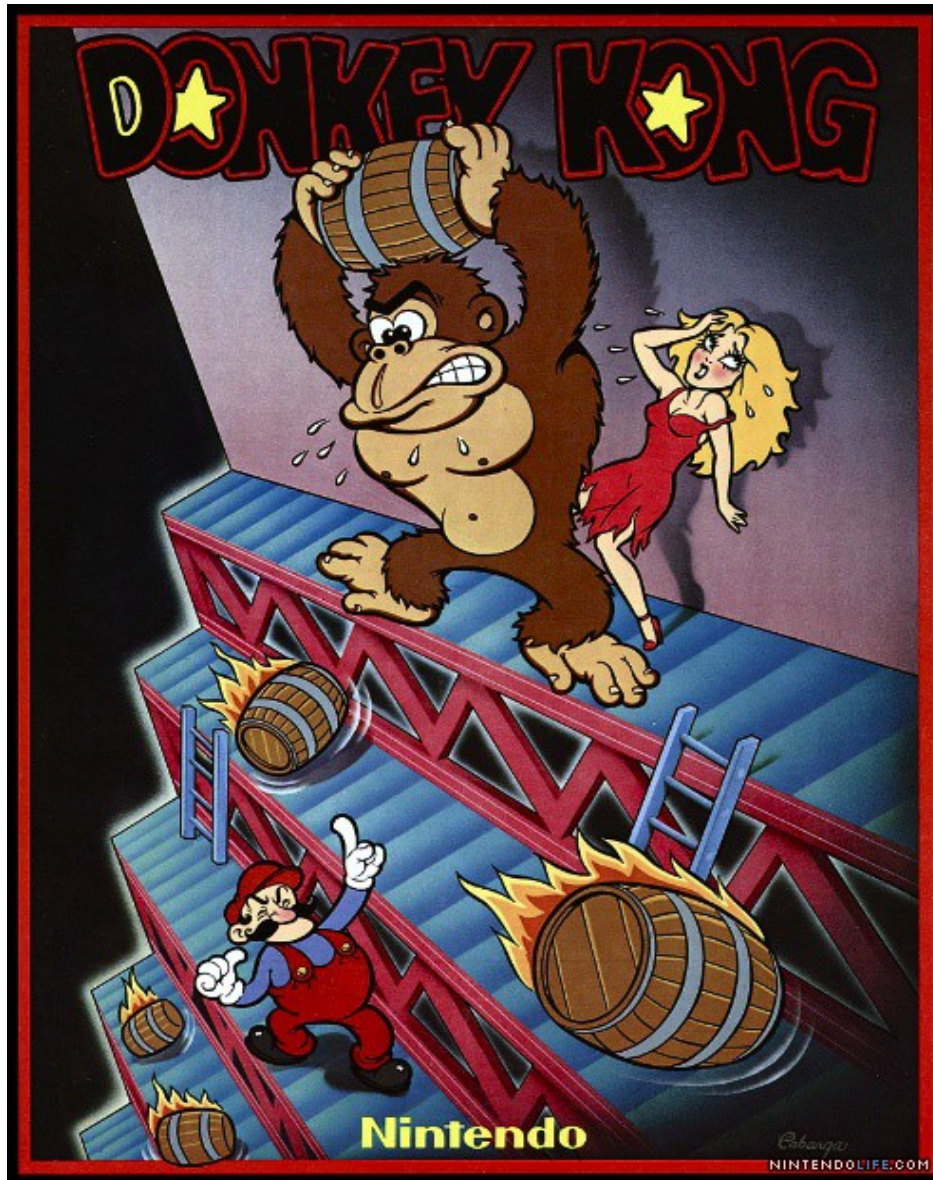## Game Design Document

Developed By: Nintendo Research & Development 1
Directed By: Shigeru Miyamoto
Release Date: July 9th,1981
GDD By:Shaun Housden

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Gameplay

High Concept

Donkey Kong is a 2d arcade platformer where the player must dodge obstacles thrown at them by a large gorilla

Story Synopsis

A carpenter, named Jumpman, owns a pet gorilla and also has a beautiful girlfriend named Pauline. After mistreating his pet gorilla, Donkey Kong, the gorilla becomes fed up and kidnaps Pauline and escaped to a local construction site. Jumpman must now defeat his previous pet and save his girl.

Gameplay Description

Donkey Kong will be a 2d platformer based around the base concept of quick reflexes and platforming. Jumpman, the main protagonist, will spend the time dodging enemies as well as things thrown by Donkey Kong, the main antagonist. Jumpman's most basic goal will be to reach the top of each of the 4 stages to reach his girlfriend, Pauline.

Between Jumpman and the top of the each stage will be a variety of enemies and obstacles stopping him. Some will be things thrown by Donkey Kong himself which will roll down the stage such as barrels and trampolines. Enemies will also be abundant such as trouble bugs and cement trays which the player will have to avoid at all costs under the threat of a one-hit death.

Players will have to use their reflexes and Jumpman's world renowned jumping ability's to avoid enemies and obstacles. Or if permitted they can use hammers found in some stages to destroy enemies and obstacles to get rid of them as well as gain points. Players will do 4 stages that feature new screens and obstacles to face until they defeat Donkey Kong at the end of stage 4.

Once the player has completed the initial 4 stages, the stages will loop, but will get harder and harder with quicker enemies and constantly changing variables to account for.

First Minutes

After the player has inserted there coin into the cabinet, the screen will fill with a dark and desolate construction site. After a second, music will begin that sets a grim and difficult tone for the player as the main villain, Donkey Kong, climbs a pair of ladders holding Pauline under his arm. Donkey Kong then precedes to make the girders of the construction sight fall and a smile will appear across his face.

A screen will appear challenging the player to see how high they can get on the construction site. As the game begins Donkey Kong will throw a blue barrel down at the oil drum at the very start of the stage and a flame enemy will appear from it, forcing the player to move forward or perish. As the player manuvers up the construction site using the ladders to move vertically and using the falling girders to horizontally. As the player continues up the site, Donkey Kong will continue to throw barrels down the cite as they will follow the horizontal girders and have the capacity to fall down the ladders to cut the

player off.

The player has the ability to jump over the barrels or use hammers located on the first and fourth girder levels to smash the barrels. The player will dodge and destroy barrels as they proceed up the 5 floor tall site to get the Pauline and Donkey Kong at the top. As the player gets to the highest point of the site to rescue Pauline, Donkey Kong will pick her up and escape with her to the next level.

Game Flow
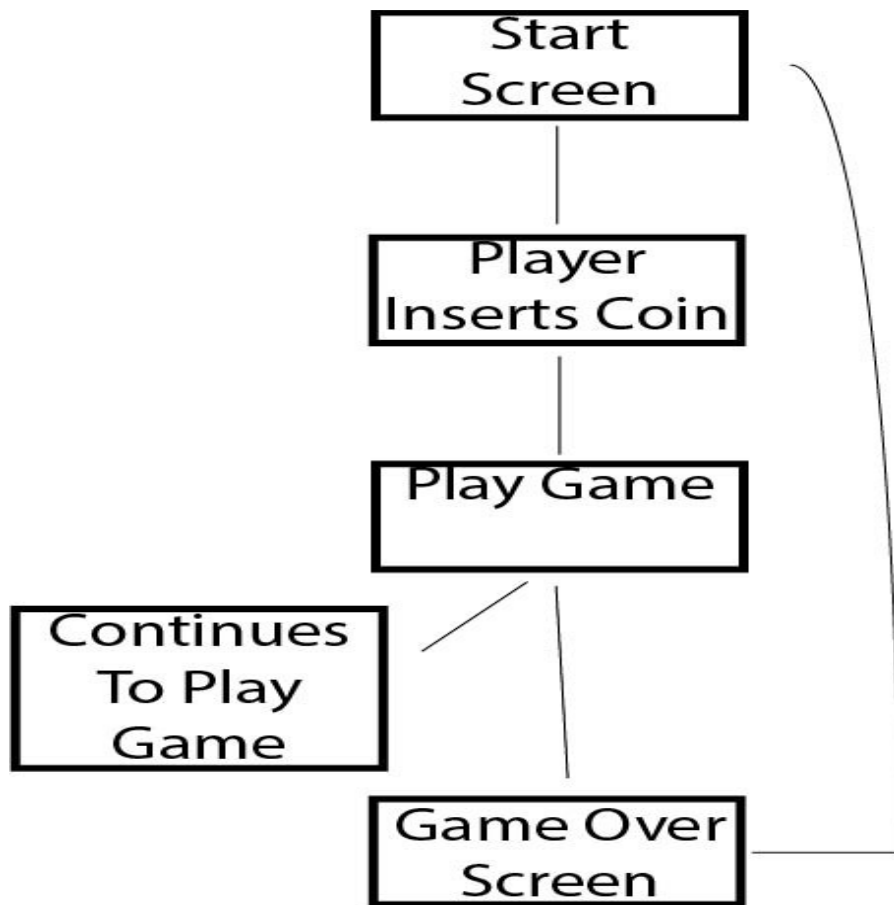
Victory Conditions

For the first three stages, players must dodge all obstacles and reach Pauline at the top of the stage to save her. On the final stage, in order to complete the game, players must remove all of the bolts located on the stage in order to make the stage collapse and for Donkey Kong to be defeated.

Although the story and new content end at stage 4, the game will continue getting progressively harder. At this point, the victory condition is getting as high as score as possible for the high score screen located on the start screen.

Once the player reaches there 22 second round of the game, the player will be able to play for a few seconds before the player is killed due to an error in the code. This "kill screen" will effectively be the end of the game, and so score will still be considered the final victory condition.

Number of Players

Donkey Kong has a two player non-simultaneous game mode, where 2 players take turns playing the game after one player dies.
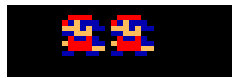
HUD

Scores

The current score for the player is shown on the far left at the top of the screen as well the current high score that us held on the arcade cabinet is shown in the middle.

Lives

Lives are indicated at the top of the screen just under the players current score and is represented by three smaller Jumpman sprites with each representing one of the three available lives to the player at the beginning of the game.

Level Counter

The level counter is located on the right side of the screen directly adjacent to the lives counter. It represents the amount of times that the player has completed the 4 stages of Donkey Kong. Leading to the maximum of 22 when the game will hit its kill screen.

Bonus Counter

The bonus counter holds a similar purpose as the score counter, but instead of continuously keeping the players score it instead counts down from 7000 points, at which point after the player has completed the stage they are rewarded with a whatever number is left as a bonus for finishing the level quickly. As well this bonus counter is utilized as the timer for the stage that you are currently on. If it runs out than Jumpman will die.

Menus

The Opening screen for Donkey Kong which is shown if no player has entered a quarter into the machine. If no one plays the game for a while than then a demo will begin to play.

This screen is shown to indicate which stage the player is currently on, with 25 m representing stage 1 and 100 m representing stage 4

This screen is shown after the player loses all of their lives and their high score is inserted

Cut Scenes

The opening cut scene in which Donkey Kong is shown climbing up the construction site using a pair of ladders while Pauline is under his arm. As he reaches the top, Donkey Kong places Pauline at the very top of the stage and jumps up and down in order to make the girders collapse a bit. He then laughs at his past owner,Jumpman, and dares that he try and come after him.

The Closing cut scene in which Jumpman finally destroys the rivets keeping the construction site up and sends Donkey Kong down to the ground where he is defeated. Jumpman than finally has the chance to be reunited his his precious Pauline.

Controls

Donkey requires the use of a left and right movement from the joystick and a single action button that is used for jumping.

As well there is a button to select whether the game will be played in a 1 or 2 player mode.

Levels

Stage 1 – 25m

- Ladders
- Broken Ladders
- Blue Barrels
- Normal Barrels
- Trouble Bug
- Oil Drum
- Hammers

This stage begins with a 7 story high construction site, of which the girders are angled in order to allow for normal barrels and blue barrels to roll down the stage. The goal of this stage is to reach the top where Pauline stands on the 7th floor of the construction site. Upon the stage starting, Donkey Kong throws a blue barrel directly at the oil drum at the base of the stage causing a Trouble Bug to appear. The player is then forced to move forward and ascend the site using the ladders that are not destroyed to climb up. Donkey Kong will continuously throw down Normal and Blue Barrels which will fall down the site on the girders, but can also use the ladders both broken and still complete to skip floors of the site. Jumpman must dodge these barrels by either jumping over them or by using hammers to destroy them.

Stage 2 - 50m

- Ladders
- Cement
- Pauline Umbrella
- Pauline Hat
- Trouble Bug
- Retracting Ladders
- Conveyor Belt
- Oil Drum

This stage begins with a 6 story high construction site, of which the girders are all horizontal, but are spaced out on story 3 which requires jumping by the player to cross. The goal of the level is to reach the 5 story of the stage where Donkey Kong can be seen moving back and forth the entire time. Trouble Bugs as well as Cement are the main enemies of the stage. The Trouble Bugs will traverse the level using the ladders, while the cement will use the moving parts of the stage to move. Floors one, three and four all move randomly causing the player to either move slower or more quickly depending on if Jumpman is moving in the same direction as the floor is going. As well the top ladders leading to the end of the stage will continuously retract stopping Jumpman from reaching the top of the level. On the third floor there is also a oil drum which the player must avoid due to the floors pushing the player into it. Jumpman will traverse the level using the ladders and jumping to get across the gaps located on floor three. All of Pauline's Lost Items are throughout the stage for their respected point values.

Stage 3 - 75m

- Ladders
- Elevators
- Pauline Hat
- Pauline Umbrella
- Pauline Purse
- Trampolines
- Trouble Bugs

This stage rather than compromising of floors is a series of girders that the player is forced to platform across. The goal of this stage is to reach the top platform where Pauline is located. As well as the girders that require more platforming than previous stages, there are also platforms that move vertically both in an upwards and downwards direction. This stage requires much more precision as there is a risk of death from both a more than two story fall as well as touching the very bottom of the stage. Trouble Bugs are located in this stage and utilize the various ladders in order to traverse their respective zones. Donkey Kong as well throws Trampoline projectiles from his place at the top of the stage. All of Pauline's Lost Items are throughout the stage for their respected point values

Stage 4 - 100m
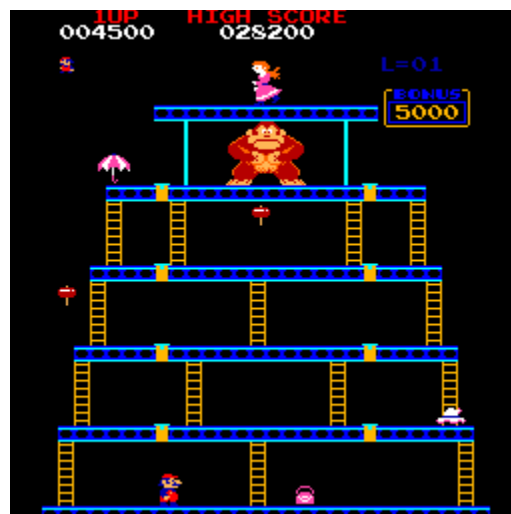
- Ladders
- Pauline Hat
- Pauline Umbrella
- Pauline Purse
- Hammers
- Trouble Bug
- Rivets

This stage begins with a 5 story tall construction site, where all girders are horizontal. Once the player has removed all rivets from the stage, Donkey Kong will fall and the first run of the game will be completed. Traversal is done with ladders located on all levels which vary from three ladders on storeys 1 and 3 and four ladders on storeys on 2 and 4. While this stage has enemies, Trouble Bugs, its main obstacles are the rivets located on floors 2-5. Jumpman must jump over each of these rivers in order to make them disappear. As he ascends the different floors he will come across Pauline's hat,umbrella and bag which will give the player a certain number of points depending on the levels the player is at. As the player ascends the stage and removes rivets from the construction site, more trouble bugs will spawn. Defeating these enemies can be done through the hammer located on the 4th floor of the stage, but avoiding them is suggested.

Enemies

Donkey Kong
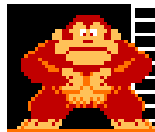
Donkey Kong is the main antagonist of the game and is the entity which is directly attacking you in stages 1 and 3. In stage 1 he throws normal and blue barrels at Jumpman and in stage 3 he throws the trampolines at you. Although in all 4 stages he can and will cause the death of Jumpman if he comes in direct contact with him.

Normal Barrels

Barrels are the main obstacle that is found in stage 1. They will roll down the girders or have the capability to roll down ladders both broken or complete. Barrels can also be wild which means that Donkey Kong will throw the barrels directly at the player. Barrels can be destroyed with the use of the hammer or dodged completely by jumping over them. Contact with causes immediate death to Jumpman. (Please refer to technical for specifics about spawning and points gained through defeat)

Blue Barrels

Blue barrels like normal brown ones, are thrown by Donkey Kong at the top of stage 1. Like normal barrels they will either follow the girders or will fall down ladder as well as be wild barrels. They can be jumped for a point value, depending on a variable. Blue barrels also will cause the creation of Trouble Bugs if they come into contact with a oil drum like at the one located at the bottom of stage 1. Blue barrels are to avoided by either jumping over them or destroying them using a hammer. Contact with causes immediate death to Jumpman.(Please refer to technical for specifics about spawning and points gained through defeat)

Cement Trays

Cement Trays are located on the third stage and are motionless on their own. They will move based on the movement of the conveyor belts under them. They can be destroyed by hammers as well are fatal to Jumpman on contact. Cement Trays can be jump over also for 100 points. (Please refer to technical for specifics about spawning and points gained through defeat)

Trampolines
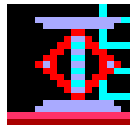
Trampolines are located on the third stage and are thrown by Donkey Kong at the top of the stage. The Trampolines are thrown in a straight line on the stage that Donkey Kong stands on, but jump up and down as they move in a wave pattern. They can not be destroyed by any means, but can be jumped for 100 points. Contact with causes immediate death to Jumpman. (Please refer to technical for specifics about spawning and points gained through defeat)

Trouble Bug
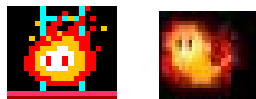
Trouble Bugs appear on all 4 stages, and are spawned from oil drums when either a blue barrel hits them or will re spawn at random. In the first stage they will appear from the oil drum at the bottom of the stage when a blue barrel hits it. On the second stage they will appear from the oil drum at random. On the third stage they spawn at two locations at the start of the stage. And on the final stage, they will

spawn at random from different sides of the stage. Contact with causes immediate death to Jumpman. (Please refer to technical for specifics about spawning and points gained through defeat)

Items

Hammer

The hammer is the only offensive/defensive item that Jumpman has at his disposal, excluding his basic ability to jump over enemies and obstacles. The hammer allows Jumpman to destroy barrels,cement piles and trouble bugs when they are available. While the Jumpman has the hammer though he is unable to jump and climb ladders. As well by smashing enemies the player is rewarded with points and different amounts for different enemy types and depending on the timing (Please refer to technical for scoring)

Pauline's Lost Items

Pauline's Lost Items are a series of three items that Jumpman can find though out stages 2-4. All items are those owned by Pauline as she has been dragged up the construction site and has dropped. While the items aren't required to progress in the game, they do give the player points for each of them collected. In the first level, each lost item will be worth 300 points, while in level 2 each item will have a value of 500 points. Finally beyond the third level the items are worth 800 points.
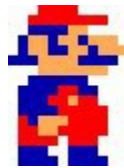
Oil Drums

Oil Drums are an item that can be used for both gaining points as well as spawn enemies. On Stage 2 for example players can jump the barrel in order to gain 100 points. The oil drum can can be used to spawn Trouble Bugs if a blue barrel hits them. If Jumpman comes in contact with an oil drum he will die.

Art

Main Characters

Jumpman

Jumpman will be a small and fat character who in comparison to his antagonist will seem weak and tiny. His appearance will be that of a hard working carpenter with a pair of red overalls over a blue shirt. He will have blue hair and a blue moustache, the moustache is due to our inability to differentiate between his nose and mouth. His nose will be big and round, again to make sure it sticks out and is noticeable on his face.

Obviously Jumpman will require a variety of different animations because he is our main character so the required animations will include:

Running Animation
    -Jumpman's arms extending up and down
Jumping Animation
    -Jumpman's arms extended while airborne
Climbing Animations
    -Jumpman's back while he climbs up ladders
    -Jumpman's back as he reaches just before the top of the ladder with one arm extended up
    -Jumpman's rear end as he pulls himself up onto the next platform
    -Jumpman's back once he is standing on the next platform
Hammer Animations
    -Jumpman with the hammer raised up
    -Jumpman smashing the hammer down onto the ground
    -Jumpman leg extending while he walks with the hammer
Death Animation
    -Jumpman spinning in a circle, facing the viewer
    -Jumpman Laying down with his feet extended in the air, with a halo above his head

Pauline

Pauline will be a tall and skinny character to insensate her differences to Jumpman. She will be at least

2 Jumpman's tall in height. She will have red hair and a long pink gown with a lighter pink trim at the base of her dress.

Pauline requires far less animations due to the fact that she is used more as a prize than an actual foe so her animations will include:
Standing Animation
      -Pauline will shake her body, excluding her head, as Jumpman races up the tower
      -As she shakes "HELP!" will appear i big blue letters beside her

Winning Animation
      -Once Jumpman reaches the top of the stage, Pauline's hands will drop to her side indicating her giving him a hug
      -A pink cartoon heart will appear between them
      -Unless it is stage 4 though, this animation will be followed by the heart being broken as she is dragged away by Donkey Kong

Donkey Kong
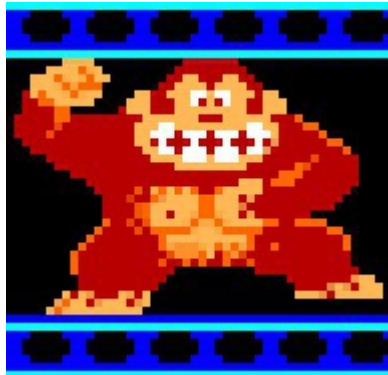
Donkey Kong will be far the largest sprite in the game being at least three times taller than Jumpman and at least 5 times larger than him in width. He is a large gorilla with red fur covering his arms,legs,back and forehead. Of him that is not hair will be orange skin. He has large protruding ears and has a smile that is cheeky in a way and almost mocking. When thinking about his design, King Kong is a good example to look towards in the form of style that the game is going towards.

Most of Donkey Kong's Animations are involved in either the opening cinematic or his defeat at the end of the game:

Climbing Animation
      -Donkey Kong climbing the ladder in the intro cut scene, with his back to the viewer, One hand on the ladder, other holding Pauline close to him
      -Donkey Kong climbing the ladder with both his hands on the rungs
      Jump Animation
      -Donkey Kong jumps with his back to the viewer as he reaches the top of the construction site
Destroying Animation
      -Donkey Kong standing still as he jumps in a wave form and knocks down the construction site
Smiling Animation

-Donkey Kong in his default position grinning at the player
Throwing Barrels Animation
     -Donkey Kong turning left to grab a barrel
     -Donkey Kong turning to face the front, holding the barrel
     -Donkey Kong turning right and placing the barrel on the ground
Pound Chest Animation
     -Donkey Kong smiling as he bangs his chest with one fist and raises the opposite leg
     -Donkey Kong smiling as he bangs his chest with one fist and raises the other leg
Losing Animation
     -Donkey Kong's Pound Chest Animation speed up
     -Donkey Kong upside down and smiling as he falls
     -Donkey Kong upside down, hitting his head on the ground, as sparks come from his head and his eyes spin in his head

Enemies

Trouble Bug

Trouble bugs are the size of Jumpman and about the same width. They are flames with two tiny black eyes popping out of them. They have a different sprite for the last stage that is less like a traditional fire like from a camp fire but in fact have a small tailing jutting from them. When a hammer is grabbed by the player both sprites for Trouble Bugs turn a blue and red colour as opposed to their normal red and orange colours.

Walking Animation
     -As Trouble Bugs walk their sprites becomes slightly smaller and have less sparks coming from their heads

Normal Barrel

Normal Barrels look like traditional brown barrels. They have two blue stripes going across the top and two vertical stripes that are a lighter brown going down either side. The bottom view shows a small circle at the top and a blue line going through the middle

Rolling Animation
     -As the barrels roll down stage 1 they are alternating between 4 different sprites of their side view that has the distinctive blue dot and line moving 45 degrees each time
Falling Animation
     -As barrels drop off of one story of the construction site to another, they bounce up a bit
Ladder Animation
     -As the barrel falls down a ladder, a side view is shown as it falls until it reaches the ground

again
Destruction Animation
      -When the barrels are destroyed by hammers they blow up into a small blue diamond that
      extends out into a slightly larger circle than a circle the size of Jumpman's torso
      -Finally the circle explodes into a small firework in blue

Blue Barrel

      Blue Barrels are the same design and look as Normal Barrels, but use a blue and white colour pallet instead of a brown one. The two stripes across the top are white while the rest of the barrel and two vertical stripes are a dark blue and light blue. The bottom view shows a skull in white.

Rolling Animation
      -As the barrels roll down stage 1 they are alternating between 4 different sprites of their side
      view that has the distinctive skull moving 45 degrees each time
Falling Animation
      -As barrels drop off of one story of the construction site to another, they bounce up a bit
Ladder Animation
      -As the barrel falls down a ladder, a side view is shown as it falls until it reaches the ground
   again
Destruction Animation
      -When the barrels are destroyed by hammers they blow up into a small blue diamond that
      extends out into a slightly larger circle than a circle the size of Jumpman's torso
      -Finally the circle explodes into a small firework in blue

Cement Trays

Are sand coloured cement piles placed on a blue plate. They are half the height of Jumpman and 1 1/2 his width.

Trampolines
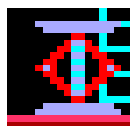
Are blue and red springs that are shaped like T's with a line at the base along with a circle of red within it.

Moving Animation
      -As the Trampoline moves it retracts up and down as it moves in a wave pattern across the
      ground until it reaches the ledge and falls and disappears

Items

Hammer

Is a hammer with a brown grip and a red hammer head. The grip slightly pokes out of the top of the hammer head and there is a white gleam on the hammer head. The hammer is the size and width of Jumpman

Pauline's Lost Items

These are Pauline's lost items that are scattered around each stage after stage 1. They are a umbrella, hat and purse. All of the items have a colour palette of pink and white. The hat looks like a witch's hat with the tip sagging, bottom is frilly and there is a blue ribbon around the rim. The umbrella is has a circus tent style white and pink pattern on the top, with a white stick out the bottom and a pink handle. Finally the purse has a pink handle with a half circle of pink as to actual bag attached to it.
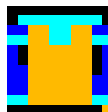
Oil Drums

Oil Drums are a blue barrel with flames coming out of the top. Oil is written in letters across the front with two perpendicular blue lines above and below it.

Flame Flickering Animation
    -The flames in the barrel begin as a four small flickering lines of fire, following this they burst
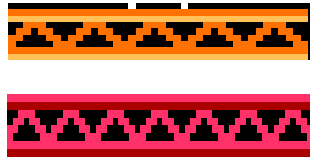   into a barrel wide flame that doubles in size and width

Rivets

Rivets are yellow rectangles with aqua blue tops that are the 1/2 the width of Jumpman and around 2/3 his height.
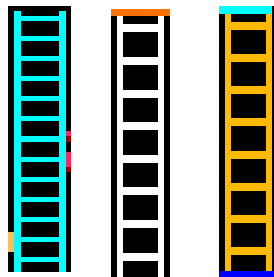
Level Components

Girders

Girders are what make up the construction site on stages one,two and three. They are perpendicular lines with an upside down v pattern throughout. Their colour schemes are pink as well as yellow. In stage one the girders are on a slope and are at a lower of angle of about 20 degrees.

Ladders

Ladders are two horizontal lines the width of Jumpman apart that are perpendicular and have a line connecting them together to show rungs. Their colour schemes vary from blue to white all the way to yellow. There are also broken ladders which are the same as complete ones but lack a few rungs between one story and another, shown as a gap.

Conveyor Belt

Conveyor belts are similar in look to the ladders, but are exclusively yellow. They are shown horizontally instead of vertically like ladders and are 1/3 skinnier in width. At the end of the belts are rounded pulleys that are ovals on the edges of the belts. They have a red circle in the centre with a green smaller rectangle inside of that. Then on the edges of pulleys is a purple outline

Retracting Ladders

Retracting ladders are the exact same as regular ladders, except they are exclusively white in their colour scheme. They're slight difference is that on the top half of these ladders the arms and rungs of the ladder are pushed out slightly and overlapping onto the bottom half of the ladder.

Retracting Animation
	-The top half of the ladder that is overlapping the bottom half will lower itself so that it lays on top of the bottom half of the ladder, making climbing to another level impossible

Elevators

Are yellow pulley systems that are shown pulling red poles that are attached to girders and are used as platforms in stage three. The pulleys are to rectangles connected together and look like systems in elevator shafts to move elevators.

Moving Animation
	-As the pulleys pull, they should show the girder platforms pulling them up or down, depending on which way they are going.

Horizontal girders

Are similar to regular girders except their colour scheme is only blue. As well instead of a v pattern inside of them there is instead just a line about the distance between Jumpman's feet.

Sound Effects

Insert Coin
Player inserts their coin and it should sound upbeat and positive.

Girders Destroyed
When Donkey Kong destroys the girders positions, should sound like metal hitting metal with a hint of an echo.

Donkey Kong Smiles
When Donkey Kong Smiles, should be obnoxious and makes you want to beat him. Almost like the sound of a car alarm.

Jumpman Walking
Jumpman's feet repeatedly hitting the ground. Should sound like they are very light footsteps in order to push the idea that he is a mush smaller hero than the average.

Barrel Hits Oil Can
The sound when a blue barrel hits an oil can, should be the sound of flames appearing like the flame has just become much larger.

Jumpman Goes Up Ladder
The sound of Jumpman going up the ladder, the sound of footsteps like his feet crawling up the last few steps.

Barrel Gets Hit With Hammer
When a barrel gets hit by Jumpman, should sound sort of high pitched and electronic.

Get Points
A quick and effective ping noise that gives the player reinforcement to get more points and play more

Jumpman Dies
The sound of Jumpman spinning as he dies followed by a deep soulful tune that tells the player they have done something wrong.

Donkey Kong Hits Chest
The sound when Donkey Kong beats his chest, should sound like very large footsteps approaching. To show his strength and power.

Trampoline Moves And Falls
The sound of the trampoline bouncing up and down like a spring, fell by a long drawn out falling noise like the Trampoline itself is screaming as it falls to the bottom.

Construction Site Falls
A quick sound byte of success like a ring as something breaks on the construction site beam.

Donkey Kong Hits Chest Quicker
Just as Donkey Kong Falls, the sound should sound much lighter sowing Donkey Kong's fear and that he is no longer a threat.

Donkey Kong Falls
The sound of Donkey Kong falling through the air as you hear a loud thud on the ground.

Music

Intro Song
A foreboding tone that will set the tone for the title sequence in which Donkey Kong has stolen Pauline

as is now taking her to the top of the construction site.

Stage Screen
An upbeat tune that will prepare the player for the challenge ahead.

Stage 1 Music
A tune that sounds very upbeat and bouncy to go along with the platforming of the game as well as the setting the mode to be that of fun.

Hammer Song
A tune that insinuates that you have become more powerful than your normal state, but also is quick to make the player know that its for a limited amount of time.

Get Girl Music
A tune that will make the player feel like they have succeed and are about to receive a prize for winning.

Don't Get Girl Music
A tune that is the complete opposite and sounds very deep as if Donkey Kong himself is laughing at you for not really winning.

Stage 2 Music
Unlike Stage 1, this music sets the tone that this is not fun and games anymore. This is a challenge that will not be easily completed.

Stage 4 Music
Should sound like a mi of the music from both stages 1 and 2 in order to bring the experience ass a whole together into one concrete experience.

Running Out Of Time Music
Forces the player to feel as if they have to do something fast or else they will lose. Should feel very different then other songs to make the necessary impact.

Winning Music
A tune that is happy and almost like a sitcom. The moment is comedic and triumphant as Jumpman has finally beat just a gorilla.

Technical

Difficulty Increases

Donkey Kong has a built in difficulty counter that s effected by two main factors. The first and most straight forward way is by what level a player is on. Players start on level 1 where they must finish the four stages or maps of Donkey Kong, with it ending in the player defeating Donkey Kong. Once this is done the game "resets" to the first stage and the counter in the top corner will indicate the next level, in this example two. With each increase in difficultly the games difficult increases by one level. This increase will occur until it reaches level 5 which is the highest difficulty it will raise too and with 1 being the easiest.

As well difficulty increases based on time as well. Every 34 seconds of game play the counter of 1 to 5 will increase by 1 point each time.

Enemy Scoring

Regular Barrels

Regular barrels are worth different point totals depending on a variety of factors. Just jumping over a barrel will reward the player with 300 points as well the player has the ability to jump over 2 and 3 barrels at a time which will reward them 300 and 500 points respectively. Smashing regular barrels with the hammer will always reward the player with 300 points.

Blue Barrels

Blue Barrels just like Regular Barrels have a variety of different ways to score points. Like Regular Barrels jumping over a barrel will reward the player with 300 points as well the player has the ability to jump over 2 and 3 barrels at a time which will reward them 300 and 500 points respectively. Blue Barrels will give either 300,500 or 800 points when they are smashed by a hammer and are determined by internal counters in the code itself. 500 points are most likely to be given followed by 300 and 800 points which have the same likelihood of appearing.

Trouble Bugs

Trouble bugs will award players 100 points for jumping them and will increase by 100 for every firebug that is simultaneously jumped. Trouble bugs are similar to blue barrels in how there points for smashing occurs due to an internal counter. Unlike barrels though the chances are different for each point total. 300 points is most likely followed by 500 points and ending with 800 points which has a very low chance of occurring.

Cement Trays

Jumping cement trays awards the player 100 points per jump. They have the same chances as blue barrels and being smashed. Smashing trays awards the player 500 points most likely then followed by 500 and 800 points which appear just as likely.

Springs
Jumping springs awards the player 100 points per jump.

Oil Can
Jumping oil cans awards the player 100 points per jump.

Enemy Spawning

Trouble Bugs

They will only spawn up to five on a board at any one time and will spawn at different rates depending on the internal level of difficulty. Depending on the stage the player is on, Trouble Bugs will spawn at different rates and methods. On stage 1 the amount of fireballs will be determined on the internal difficulty setting. On stage 2 they will spawn at the beginning of the stage and the number will be determined on what level between 1 and 5 the player is on. On stage 3, only two Trouble Bugs will appear on their respected platforms and no more will spawn (Not that these can be killed). On stage 4, levels 1 and 2, it takes about 4 seconds for a Trouble Bug to spawn. Level 3 to 4 will take 2 seconds per to spawn and finally Level 5 and up will spawn every second.

Enemy Movement

Trouble Bugs

Trouble Bugs move at a semi-random state. They are able to climb ladders that are both broken and unbroken. This is the only aspect of their movement that is not random as they will only use ladders if they are approaching from the left side of the screen. Depending on the internal level difficulty they will move faster and faster with each level increase.

Barrels

Both blue and brown barrels have the ability to move down the girders of stage 1 as well as down ladders that are both broken and unbroken. If a Normal Brown Barrel rolls onto a girder below Jumpman or if he jumps over one then they will roll off the edge of the screen and disappear. Blue Barrels though will always roll to the bottom in order to hit the oil can. The path in which both types of barrels will move is dependent on a few factors. Initially barrels will move dependent upon Jumpman's location on the map. Its ability to move and follow will be determined on the internal level difficulty between 1-5, in which the higher the difficulty the more likely barrels are to "follow" Jumpman. There is also a small percentage chance though that barrels will just take a randomly determined path and not follow Jumpman at all.

Every once in a while, a type of barrel will be thrown called a wild barrel which do not take the normal route of rolling down the girders, instead they are barrels that will jump from side o side of the stage or will be heat seeking. Wild Barrels are rare and have a less than 10% chance of being chosen by Donkey Kong to throw. There e 4 different types of wild barrels which are more likely to appear depending on the level between 1-5 that the player has on that stage. Wild Barrels 2 and 3 will track Jumpman's movement and steer, Wild Barrel 1 will move at complete random and finally Wild Barrel 4 always fall directly down from Donkey Kong. Internal difficulty level 1 and 2 will cause Wild Barrel 1 to appear,

internal difficult 3 and 4 will cause Wild Barrel 2 and internal difficulty 5 will cause Wild Barrel 3.

Trampolines

They will always move in the wave form that is found when they first appear and will always hit the edge of level and then fall down to the bottom of the screen and disappear.

Conveyors

These are only located on the second stage, but still are controlled by Donkey Kong like Barrels. The lowest conveyor level only changes when Donkey Kong has moved all the way to left side of the screen. And the second Conveyor level will change depending on the vertical location of Jumpman and the stage. Once He reaches halfway up the stage it will switch direction and will also switch once Donkey Kong has traversed the top level 2 times.

Retracting Ladders

Found in Stage 2. Will extend out for about 7 seconds and then descend. This will not change regardless of the difficulty.

Jumpman's Movement

Jumpman's is one of the slowest moving items and characters in the game. Only the motionless enemies and items are slower than him along with the conveyor belts which are only slightly slower than him. Trouble Bugs and Barrels of both types are faster than him, meaning that running in the opposite direction is never an option. His jump though is always the same distance of about 2 twice his height and so it enables him to jump over just about anything that he faces, if it comes to him in a one on one opposition with an opponent. He is capable of climbing ladders which stop jumping and horizontal movement.