

Cobble Systems List

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PLAYER	DESCRIPTION
Movement	<ul style="list-style-type: none"> Pressing A will move the player left and pressing D will move them right Pressing W or Spacebar will cause the player to jump
Death	<ul style="list-style-type: none"> The player can die from: <ul style="list-style-type: none"> Heavy physics objects falling on top of them Colliding with hazards (generic ex: spikes) Falling off screen Objects crushing them (ex: pistons from above) Player death sequence: <ol style="list-style-type: none"> Player controls are locked Death animation and sound will play Level will fade to black and sound fades out Level will restart Level will fade from black and sound fades in Player controls are unlocked

Interactable Gears	<ul style="list-style-type: none"> • Interactable gears can be placed and removed from mechanisms by pressing E when the player is within range • The player can only hold a single gear at a time • When holding a gear, the player's jump height becomes much shorter
Switching Levers	<ul style="list-style-type: none"> • The player can switch levers left or right by pressing E • Levers have hoses on both the left and right side
Plugging and Unplugging Hoses	<ul style="list-style-type: none"> • The player can grab a hose from one side of a lever or a steam box by holding E • The player can also plug hoses into steam boxes by holding E • When holding a hose end, the hose will attach to the character's waist (<i>this is likely subject to change</i>) • When plugged into a steam box, the hose end will snap from the player's waist to the socket's position • The opposite happens when a hose is unplugged from a steam box
Hose Restrictions	<ul style="list-style-type: none"> • Hoses have a fixed length that they can extend from levers • If the player carries the hose too far, the hose will stop extending from the lever • If the player tries to carry the hose past it's max length the hose will be released • While holding a hose, the player can voluntarily release that hose by holding E • When a hose is released, it will retract back into the lever it was grabbed from • The player can hold one hose end at a time and can also carry one gear along with it

Pushing and Pulling Boxes	<ul style="list-style-type: none"> • There will be specific boxes that the player can push and pull from either side by holding E and moving in the left or right direction • These boxes will have physics and behave like a heavy box would in reality • If a box falls on top of the player, they will die • If the player grabs a box while holding a hose, the hose will be released and they will hold onto the box instead • The player can also hold one gear on their back while grabbing boxes
Restrictions of Boxes	<ul style="list-style-type: none"> • While holding onto a box: <ul style="list-style-type: none"> ◦ Player cannot jump and will move slower ◦ Cannot interact with any other objects (gears, levers, hoses, etc.) • If the player pushes a box to a point where it collides and cannot move any further, the character will stop moving • If the player is moved upward or downward (ex: standing on a vertical moving platform) but the box stays at the same elevation, after a short delay, the character will let go of the box • If the box moves upward or downward (ex: pushing a box off a ledge) but the player stays at the same elevation, after a short delay, the character will let go of the box

STEAM POWER	DESCRIPTION
Levers	<ul style="list-style-type: none"> • When a lever is switched left, the left hose or pipes get steam power • When the lever is switched right, the right hose or pipes get steam power

Hoses	<ul style="list-style-type: none"> • When plugged into a steam box, the hose will transmit steam power to that steam box
Steam Boxes	<ul style="list-style-type: none"> • Steam boxes connect hoses to pipes • For a steam box to transmit steam power to pipes, a hose must be plugged in • Steam boxes have a socket for hoses to plug into and pipes on the other side outputting steam power to a mechanism
Pipes	<ul style="list-style-type: none"> • Pipes are fixed in place within the level and cannot be adjusted by the player • Pipes act as the path of travel for moving mechanisms • Stationary mechanisms will not have pipes, unless they are connected to a steam box (ex: piston) • Pipes will automatically provide steam power to mechanisms if they are not connected to a steam box or lever • If pipes are connected to a steam box, mechanisms will only function if the steam box is transmitting steam power

LEVEL MECHANISMS	DESCRIPTION
Functionality For All Mechanisms	<ul style="list-style-type: none"> • Mechanisms can have any number of gear holders • When a mechanism does not have a gear in each gear holder it will not function • If a mechanism does have a gear in each gear holder it will function • Mechanisms may also require external steam power to function <ul style="list-style-type: none"> ○ Mechanisms may be attached to a steam box, meaning that if the steam box is not being steam powered, the

	<p>mechanism won't function</p> <ul style="list-style-type: none"> ○ Mechanisms may also be directly attached to a lever by pipes, meaning if the lever isn't switched to the correct side, the mechanism won't function ○ Mechanisms not attached to a steam box or lever will automatically function
Moving Platforms	<ul style="list-style-type: none"> ● Moving platforms have an adjustable number of points to travel between (ex: A, B, C) ● When functioning, the platform will move in a straight line from point to point in order ● When the platform reaches an ending or starting point, it will reverse ● Moving platforms also have a set delay time to stop before move again when they reach each specific point ● When a platform's missing a gear(s) it will return to its starting position ● If a platform has no steam power, it will freeze in place
Rotating Platforms	<ul style="list-style-type: none"> ● When functioning, rotating platforms will rotate constantly at a set speed from their starting rotation ● Rotating platforms missing gear(s) will return to their original rotation ● Rotating platforms without power will freeze in place
Pistons	<ul style="list-style-type: none"> ● Pistons have a bottom piece, and top platform piece ● When functioning: <ul style="list-style-type: none"> ○ The top platform will shoot up into the air at a set speed to a set height ○ Afterward, the top platform piece will

	<p>slowly retract back into the bottom piece and have a delay time until it shoots up again</p> <ul style="list-style-type: none"> • When not functioning: <ul style="list-style-type: none"> ○ The top platform will not move ○ If the top platform is at all raised it will quickly retract down to the bottom piece, then stop moving • The top platform will shoot upward at the rotation of the object <ul style="list-style-type: none"> ○ If the object is rotated in engine, the top platform will shoot in the direction that the piston was rotated
Doors	<ul style="list-style-type: none"> • When the player walks through a door and they leave the camera's view, the following occurs in order: <ol style="list-style-type: none"> 1. The player's movement will be locked 2. The door will close behind them 3. The screen will fade out to black 4. The next level will open and fade in from black 5. The player's movement will be unlocked • When functioning: <ul style="list-style-type: none"> ○ Door will open by moving upward into ceiling at a set speed ○ Allows the player to walk off the edge of the camera's view and enter the next level • When not functioning: <ul style="list-style-type: none"> ○ The door will not move and block the player from entering the next level ○ If the door is open, it will quickly shut at a set speed by moving down and hitting the floor

PLAYER FEEDBACK	DESCRIPTION
Gears	<ul style="list-style-type: none"> • When a gear is on a mechanism that is functioning, the gear will rotate • When the player can pick up a gear, a glowing gear icon will appear above the character's head • When the player can place a gear into a mechanism, a glowing gear icon will appear where the gear will be placed • While the character is holding the gear, it will appear their back
Levers	<ul style="list-style-type: none"> • When the player can switch a lever, the lever handle will slightly glow a golden color • When the player switches a lever it will rotate to the opposite side (left or right) • Switching the lever plays a switch sound
Hose & Pipe Glow	<ul style="list-style-type: none"> • When a hose or pipe is provided steam power, it will glow an emissive gold color • If a hose or pipe loses steam power, it will return to its original, non-emissive material
Steam Boxes	<ul style="list-style-type: none"> • When provided with steam power from hoses: <ul style="list-style-type: none"> ◦ The block will emit steam particles from the top ◦ A subtle steam sound will loop
Hose Interaction	<ul style="list-style-type: none"> • Plugging and unplugging plays a plug sound
Mechanisms	<ul style="list-style-type: none"> • When the mechanism starts functioning it will fade in a looping mechanism sound and continue to loop the audio • When the mechanism stops functioning it will fade out the mechanism sound and stop playing

ENGINE TOOLS	DESCRIPTION
Object and Sprite Rendering/Hiding	<ul style="list-style-type: none"> • In game, the only objects and sprites rendered are the ones visible inside of the camera's view • When an objects or sprite leaves a certain distance from being within the camera's view, that object or sprite will be hidden (turned off) • When the object or sprite returns to a certain distance from the camera's view the object or sprite will be shown (turned back on) • This should not affect any of the gameplay and should be invisible to the player
Camera Clamping	<ul style="list-style-type: none"> • The level will have set boundaries on the X and Y axis • The camera will not be able move outside of those boundaries <ul style="list-style-type: none"> ○ Think of the all the area outside of the boundaries as collision boxes that collide with the camera's view ○ When the edge of the camera's view reaches a boundary, the camera will not move any further in that direction, even if the player does
Dynamic Camera	<ul style="list-style-type: none"> • When the player moves left or right, after a certain threshold, the camera will compensate by moving in front of the player in that direction <ul style="list-style-type: none"> ○ Example: If the player is moving rightward for more than 1 second, the camera will move to the right, in front of the character, viewing what is in the direction they are moving • The camera's spring arm length needs to be adjustable for each level

	<ul style="list-style-type: none">• When transitioning to a level with a different camera zoom, the camera will zoom in or out to adjust, after the screen has faded in from black<ul style="list-style-type: none">○ This will be done by changing the spring arm length
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