Operation Contracts

Future Gadget Lab

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# Operation Contract #01

## Operation: Pause / Resume Game

## References

Use-Case #008: Get Help

Use-Case #009: Pause / Resume Game

## Preconditions

## Postconditions

* The pause menu visibility is changed.  
  If it was , it becomes . And if it was it becomes .

# Operation Contract #02

## Operation: Sign In

## References

Use-Case #007: Sign Up / Sign In

## Preconditions

N/A

## Postconditions

* If and are correct, returns a with:
* Otherwise, returns .

# Operation Contract #03

## Operation: Use Hint Powerup

## References

Use-Case #004: Use Hint Powerup

## Preconditions

## Postconditions

* If is , does nothing.
* Otherwise:
  + Highlights the region of the key for seconds.

# 

# Operation Contract #04

## Operation: Using Protection Vest Powerup

## References

Use-Case #005: Use Protection Vest Powerup

## Preconditions

## Postconditions

* If is , does nothing.
* Otherwise:
  + The protection vest will be activated for seconds. It will protect the player from the ***Shooter Alien***.

# 

# Operation Contract #05

## Operation: Using Plastic Bottle Powerup

## References

Use-Case #006: Use Protection Vest Powerup

## Preconditions

## Postconditions

* If is , does nothing.
* Otherwise:
  + A plastic bottle is thrown to
  + that fools the ***Blind Alien***.

# 

# Operation Contract #06

## Operation: Pickup Powerup

## References

Use-Case #003: Pickup Key / Powerup

## Preconditions

N/A

## Postconditions

* If the does not have a powerup, does nothing.
* Otherwise:
  + If is storable, store it in the player’s bag.
  + Otherwise, automatically activate the powerup.

# 

# Operation Contract #07

## Operation: Pickup Key

## References

Use-Case #003: Pickup Key / Powerup

## Preconditions

## Postconditions

* If does not have a key, does nothing.
* Otherwise:
  + If is not close enough to , do nothing.
  + Otherwise, pickup the key.

# 

# Operation Contract #08

## Operation: Move

## References

Use-Case #002: Move

## Preconditions

## Postconditions

* If is moving into a wall, returns .
* Otherwise:
  + If is trying to exit a building without having a key, returns .
  + Otherwise, return , and:
    - If is :
    - If is :
    - If is :
    - If is :

# 

# Operation Contract #09

## Operation: Arrange Object

## References

Use-Case #001: Arrange Objects

## Preconditions

## Postconditions

* If is invalid (overlaps with other objects), returns .
* Otherwise:
  + Returns .

# Operation Contract #10

## Operation: Use Extra Time Powerup

## References

N/A

## Preconditions

## Postconditions

* Increases the remaining time for the player by 5 seconds.

# Operation Contract #11

## Operation: Use Life Time Powerup

## References

N/A

## Preconditions

## Postconditions

* Increases the remaining lives for the player by 1.