## Interaction Control (DONE)

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| Class | InteractionControlClass |
| Inheritance | Parent Class |
| Description | Classes for objects that can interact. All of these deal with the position, animation and material changes for interactions, NOT the interactions themselves. |
| Fields | Animator anim  IndicatorClass indicator |
| Constructors |  |
| Functions | setPosition(transform)  setAnimation(string, bool)  setAnimationTrigger(string)  setIndicator(bool)  updateThisInteraction() |
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## Interaction Classes

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| Class | InteractionClass | EnergyInteractionClass | InputInteractionClass |
| Inheritance | Parent | InteractionClass | InteractionClass |
| Description | This will keep interaction control items. This can be input or energy interactions, but this will mostly take inputs and set objects. | This is for interactions that will affect turning off and on an energy object in a grid.  Note: This takes another energy screen object as an option that would provide the ability to lock the set object based on the input on the screen. | This is for interactions that would take a screen energy object and change the input in that system. This will be only a screen obj.  This will set that screen object with the new input. |
| Fields | interactType[] permittedInteractions  InteractionControlClass controller | gridManager powerBox  energyObj obj  ScreenClass lockObj  Boolean isOn  Boolean isPowered | String input  ScreenClass obj |
| Constructors |  | setPowerManager(Energy)  getIsOn() |  |
| Functions | Interact(transform, transform)  Interact(Vector3, Quaterion)  Interact(Gameobject)  isInteractionType()  setController() | setObject()  turnoffObject() | setInput(input) |
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| Class | GridInteractionClass | GeneratorInteractionClass | HoldItemInteractionClass |
| Inheritance | InteractionClass | InteractionClass | InteractionClass |
| Description | This interaction works with turning the grid on and off. | This interaction works with turning off and on the generator | This interaction positions an item to the held position for the player.  This uses the position based Interaction. |
| Fields | SystemManager powerBox  Boolean isOn | Boolean isOn  Float maxPower | Boolean isHeld  Gameobject connectedObj  holdType type  Gameobject currentHolder |
| Constructors |  |  |  |
| Functions | setObject(bool)  setToOff() | setObject(bool) | setObject(Vector3, Quaterion) |
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| Class | ItemPositionInteraction Class | EnergyPositionInteraction Class |
| Inheritance | InteractionClass | ItemPositionInteractionClass |
| Description | This interaction would get a current held item and input it onto the current target position. | This is a subclass of an Item position that will interact with an energy object or the grid manager. |
| Fields | Transform targetPos  gameObject currentHeldItem  holdType[] permittedTypes  string permissionOverride | GridManager manager\_ |
| Constructors |  |  |
| Functions | setObject(Vector3, Quaterion)  canHoldItem(obj)  setCurrentHoldItem() |  |
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## Energy Objects

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| Class | EnergyObject | ScreenClass | Light Class |
| Inheritance | Parent Class | EnergyObject | Energy Object |
| Description | Classes for objects that use the energy system. This can be turned on and off, and completes a certain action when activated.  This is for all objects which require energy to function. This includes electric doors, screens, lights, etc. | This class shows an output and takes input from input interaction classes. If on, shows input, if off, shows error. Can also be used in energyInteraction classes as a locking mechanism. | This is specific to light objects to turn on and off lights. |
| Fields | Int energyUsage  Bool isOn  Bool isPowered  GridManager powerBox | Text text\_  Int inputSize  String commandCode | Material[] switchMats  GameObject light |
| Constructors | setPowerBox(GridManager)  getEnergyAmount()  bool isObjectOn() |  |  |
| Functions | powerObject(bool)  useObject() | addString(string)  clearString()  bool isCurrentCode()  displayText(string) |  |
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| Class | Door Class |
| Inheritance | EnergyObject |
| Description | This class opens and closes a door animation based on whether it is turned on or off. |
| Fields | Animator anim |
| Constructors | setAnimator() |
| Functions |  |

## Manager Objects

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| Class | Grid Manager | System Manager |  |
| Inheritance |  |  |  |
| Description | This is the manager of the grid. It keeps all the energy objects and manages interactions to turn them on and off.  This also turns off all switches if too much power is routed through it. WARNING: This will look for all energyInteraction classes currently under it’s system. No others. Need system for generator as well. | This will manage several grids, turning them on or off. Each system will function on it’s own. This is linked to a power port and gets power from a generator. |  |
| Fields | EnergyObjects[] objs  Bool[] objectOn  Bool gridPowered  SystemManager manager\_ | GridManager[] objs  Float generatorPower  Float currentPower  Generator gen |  |
| Constructors | setManager(SystemManager)  getPowerUsed() | setGen(Generator)  getSystems() |  |
| Functions | turnOnObject(EnergyObject)  setGrid(bool)  updatePower()  getIsOn()  updateGrids()  updateTheGrid(); | depowerGrid()  updateThePower() |  |
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