## TLG Week 2 Project

**Game Overview:**

Single player post-nuclear armageddon RPG Game

**Goal:**

Travel through rooms to find and stop the source of the radiation leak that is poisoning your village water supply

**Game Layout:**

4 rooms on a military base:  (Defined in 'Rooms')

Room 1- Entry way room

Room 2- Science Lab

Room 3- Pump Room

Room 4- Armory

**Game Play:**

Configure Player with name, and Skill Points (Defined in 'Skills')

Player is spawned into Room#1 and is shown a list of possible actions.  (Defined in 'Logic')

Player types in an action that they want to do.

i.e. Player types "LOOK" to view what is inside the current room.

Player can interact with a listed object by typing "I" followed by the name of the object to 'inspect' it

\* Player can 'hack' a terminal to open a nearby door that contains an interesting object

**Player Actions:**

Choose Player Name

\* Distribute four total skill points among the skills defined in 'Skills':

**Terms:**

| | | |
|---|---|---|
| \* | HP | Health Points = How much damage a player can sustain before dying |
| \* | EP | Endurance Points = How many times you can move or attack per turn |
| \* | DP | Damage Points= How much damage you can do per attack |

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\* **ENHANCEMENTS TO SAVE FOR LATER VERSIONS:**

**Hacking a Terminal Mini-Game**

Hacking requires a minimium hacking skill level

Hacking starts a new mini-game to guess a random number 1-10 for the terminal.

The terminal number to guess is random each hacking attempt.

After 4 incorrect guesses the terminal is locked forever.

Player can 'hack' a terminal to open a nearby door that contains an interesting object

**Add Weapons (see 'Weapons')**

**Add Enemies (see 'Enemies')**

**Choose Weapon from inventory**

## GAME TURNS

| | PLAYER ACTION | | GAME RESPONSE | PLAYER ACTION | GAME RESPONSE | PLAYER ACTION | | |
|---|---|---|---|---|---|---|---|---|
| | LOOK | | show all room contents | | | | | |
| | I | | show seletected object & ask for next action | Choose Next Action | Executes desired Player Action | | | |
| * | INV | | Show inventroy such as Weapons and healing items | | | | | |
| * | AT | | Show attributes such as Health, Carry wieght and Skill points | | | | | |

## EXAMPLE GAME TURNS

| | PLAYER ACTION | RM# | GAME RESPONSE | PLAYER ACTION | GAME RESPONSE | PLAYER ACTION | GAME RESPONSE | NEXT ACTION |
|---|---|---|---|---|---|---|---|---|
| | LOOK | 1 | Science Lab | I Science Lab | You enter the Science Lab | | | |
| | LOOK | 2 | Entry Way | I Entry Way | You enter Entry Way | | | |
| | LOOK | 2 | Pump Room | I Pump Room | You enter the Pump Room | | | |
| | LOOK | 3 | Science Lab | I Science Lab | You enter the Science Lab | | | |
| | LOOK | 3 | Armory | I Armory | You enter the Armory | | | |
| | LOOK | 4 | Pump Room | I Pump Room | You enter the Pump Room and see a termial. Do you want to access it? | Y | Termial is locked and is asking for a key card | |
| | LOOK | 4 | Armory | LOOK | You see a key card on a table. Do you want to pick it up? | y | You found a key card. | |
| | LOOK | 4 | Pump Room | I Pump Room | You enter the Pump Room and see a termial. Do you want to access it? | Y | What do you want to do with the terminal | I Key Card |
| * | LOOK | 1 | door, termial, stairway, desk | I DESK | You found intel book, do you want to read it? | Y | You gained 1 Intel Skill Point | |
| * | LOOK | 1 | door, termial, stairway, desk | I DESK | Desk is empty | | | |
| * | LOOK | 1 | door, termial, stairway, desk | I DOOR | Door is locked | | | |
| * | LOOK | 1 | door, termial, stairway, desk | I TERMINAL | the termanial can be hacked by a skill of 1 in intel | HACK | CPU checks players Intel stat | IF Player has enough Intel Skill Points THEN the terminal is hacked Termial says "Door is unlocked" |
| * | LOOK | 1 | door, termial, stairway, desk | I DOOR | Door opens and you find an MRE, do you want to keep it | Y | CPU adds MRE to inventory | |
| * | LOOK | 2 | door, termial, stairway, desk, military case, emergency box | I CASE | You open the case and find a Strength Book, Would you like to read it? | Y | You gain 1 Strength point | |
| * | LOOK | 2 | door, termial, stairway, desk, military case, emergency box | I BOX | You open the glass case and find a fire axe, do you take the fire axe? | Y | axe added to inventory | |
| * | LOOK | 3 | termial, stairway, desk, gun case, military case | I TERMINAL | The terminal appears to be the main shut off valve control ... | Y | "You have stopped the source of the radiation. Congratulations (Game Over)" | |
| * | * Enhancements to save for LATER VERSIONS | | | | | | | |

## ROOMS

| | ROOM# | Name | SIZE (horiz) | SIZE (vert) | INTERACTABLE OBJECTS | LEADS TO |
|---|---|---|---|---|---|---|
| | Floor 1 | **RM 1- Entry way room** | 9 | 9 | | |
| * | 1 | " | | | Desk-1 | Random Skill Book |
| * | 1 | " | | | Terminal | Unlocks Door-1 |
| | 1 | " | | | Stairway-2 | RM 2 |
| * | 1 | " | | | Door-1 | 2 MREs |
| | | | | | | |
| | Floor 2 | **RM 2- Science Lab** | x | y | | |
| * | 2 | | | | Terminal | Unlocks Door-2 |
| | 2 | " | | | Stairway-1 | RM 1 |
| | 2 | " | | | Stairway-3 | RM 2 |
| * | 2 | " | | | Emergency Box | Axe |
| * | 2 | " | | | Military Case | Random Skill Book & Random Healing Object |
| * | 2 | " | | | Door-2 | IFAK and Intel book |
| | | | | | | |
| | Floor 3 | **Rm 3- Pump Room** | x | y | | |
| * | 3 | | | | Desk-2 | Random Skill Book |
| | 3 | " | | | Terminal | End Screen |
| | 3 | " | | | Stairway-2 | RM 2 |
| | 3 | | | | Stairway-4 | RM 4 |
| * | 3 | " | | | Gun Case | AK |
| * | 3 | " | | | Military Case | Random Book and Random Healing |
| | | | | | | |
| | Floor 4 | RM 4 - Armory | | | Stairway-3 | |
| | 4 | | | | Key card | |
| | 4 | | | | Stairway-3 | |
| | | | | | | |
| | **\* Enhancements to save for LATER VERSIONS** | | | | | |

# OBJECTS

## INTERACTIVE OBJECTS

| | OBJECT NAME | DESCRIPTION | ACTION | STATE | CONTAINS / YIELDS / RESULTS | ROOM LOC(s) |
|---|---|---|---|---|---|---|
| * | Door | A door that may be Unlocked by Hacking a Terminal | Terminal.unlock( door ) | Locked / Unlocked | Consumable Object | 1, 2 |
| | Stairway | A path between Rooms | Player.Use( stairway ) | Travelled / Not Travelled | Unlocked Door | 1,2,3,4 |
| | Pump Control Terminal | Pump controller that needs a keycard to use | Use Key card on terminal | Locked / Unlocked | Results on winning the game | 3 |
| | Key card | Key card that unlocks pump control terminal | add to inventoy | | Unlocks Pump Control | 4 |
| * | Termial | A computer that when Hacked Unlocks a Door | Player.Hack( terminal ) Terminal.Unlock( door ) | Hackable / Hacked / Permanently Locked | Unlocked Door | 1,2,3 |
| * | Desk | An object that when Searched will yield an Object | Player.Search( desk ) | Empty / Full | Random Object: Healing_Consumable or Skill_Book | 1,3 |
| * | Military Case | An object that when Searched will yield an Object | Player.Search( object ) | Empty / Full | Random Object: Healing_Consumable or Skill_Book | 2,3 |
| * | Emergency Box | An object that when Searched will yield an Object such as a Fire Axe | Player.Search( object ) | Empty / Full | Fire Axe | 2 |
| * | Gun Case | An object that when Searched will yield an Object such as a Gun | Player.Search( object ) | Empty / Full | AK-47 | 3 |

## INVENTORY OBJECTS

| | OBJECT NAME | DESCRIPTION | ACTION | STATE | UNIT | | WEIGHT (lbs) | HEALTH ADDED (HP) | SKILL POINTS ADDED | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | INTELLI-GENCE (ISP) | ENDUR-ANCE (ESP) | STRENGTH (SSP) |
| * | Skill_Book:Intel | When read adds Intelligence Points | Player.Read( book ) | Read / UnRead | Intelligence Skill Points | | 1 | | 1 | | |
| * | Skill_Book:Endurance | When read adds Endurance Points | Player.Read( book ) | Read / UnRead | Endurance Skill Points | | 2 | | | 1 | |
| * | Skill_Book:Strength | When read adds Strength Points | Player.Read( book ) | Read / UnRead | Strength Skill Points | | 3 | | | | 1 |
| * | Healing_Consumable:MRE | Meal Ready-to-Eat, Adds HP | Inventory.Add( obj ), Player.Consume( obj ) | Sealed / Consumed | HP | | 2 | 5 | | | |
| * | Healing_Consumable:IFAK | Individual First Aid Kit, Adds HP | Inventory.Add( obj ), Player.Consume( obj ) | Sealed / Consumed | HP | | 4 | 10 | | | |
| * | Weapon | Player may have one or more weapons | Use / Return to Inventory | In-Inventory / In-Use | | | n | | | | |

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|---|---|---|
| * | * Enhancements to save for LATER VERSIONS | |

## PLAYER ATTRIBUTES

| | ATTRIBUTE | DESCRIPTION | DATA TYPE | BASE | UNIT |
|---|---|---|---|---|---|
| | Name | Player Name | String | | |
| * | Inventory | List of objects that a player can carry | Inventory | | . |
| * | Carry weight | Maximum total capacity of the weight of items in inventory | int | 50 | Lbs |
| * | Health (Stat) | Increases with health objects, decreases with exertion | int | 10 | HP |
| * | **Endurance Level (Stat)** | Ability to _____ | int | 10 | ESP |
| * | **Intelligence Level (Stat)** | Ability to perform Hack and Attack | int | 0 | ISP |
| * | **Strength Level (Stat)** | Ability to _____ | int | 0 | SSP |
| * | Hack Skill Level | Ability to hack a Terminal, determined by ?? | int | 0 | SP |
| * | Weapon * | Player has one in-use weapon, others may be in Inventory | Weapon | | . |
| | | | | | |
| | **Logic** | | | | |
| * | Check_Health_Status() | See if player is healthy, dead, etc | | | |
| * | Show_Skill_Point_Stats() | Show Player Name, and Skill Point Stats | | | |
| * | Show_Inventory() | Show Player Name, and Inventory Items | | | |
| * | Calculate_Total_Inventory_Weight() | Sum the weight of all items in inventory | | | |
| * | Configure Player() | Set all player attributes | | | |
| * | Update_Skill( skill ) | Update a skill level ... increment or decrement | | | |
| * | Hack( Terminal ) | Attempt to Hack the Terminal... Check the hack skill level | | | |
| * | Use ( Consumable_Object ) | Use the consumable and add the HP to Player | | | |
| * | Use ( Weapon ) | Ready weapon for use | | | |
| * | MoveToInventory( Weapon / Item ) | Move item to inventory if under weight maximum | | | |
| | | | | | |
| | | | | | |
| * | **\* Enhancements to save for LATER VERSIONS** | | | | |

## INVENTORY_ITEM

| | ATTRIBUTE | DESCRIPTION | DATA TYPE | BASE | UNIT | LOGIC | LOGIC | |
|---|---|---|---|---|---|---|---|---|
| * | ID | Item ID | String | 0 | | | Show | |
| * | NAME | Item Name | String | "" | | Update | Show | |
| * | WEIGHT | Item weight | int | 0 | Lbs | Update | Show | |
| * | TYPE | Type of item -(See Objects) | Object | - | Item | Update | Show | |
| * | QTY | Item Quantity | int | 0 | | Update | Show | |
| * | QTY_MAX | Maximum allowed | int | 0 | | Update | Show | |
| | | | | | | | | |
| | | | | | | | | |
| | **Logic** | | | | | | | |
| * | Update( item ) | Change the item | | | | | | |
| * | Show_Item_Weight() | Return weight of item | | | | | | |
| * | Show_Item_{attribute}() | Return the value of {attribute} | | | | | | |
| | | | | | | | | |
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# WEAPON TYPES

| | WEAPON | WEIGHT (lbs) | DESCRIPTION | CHANCE TO HIT ENEMY | WEAPON DAMAGE (HPs) | ENDUR-ANCE (ESP) | EFFECTIVE RANGE (meters) | ACTIONS AVAILABLE | ENHANCED BY | AMMO | CAPACITY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| * | **Combat Knife** | 2 | Close range short melee weapon damage is effected by Strength skill | 50% | 3 | -2 | 1 | standard issue | Strength Skill | N/A | 1 |
| * | **Fire Axe** | 8 | Close range Long melee weapon. May be found in various containers throughout the game | 60% | 6 | -4 | 2 | add to inventory | Strength Skill | N/A | 1 |
| * | **M-1911 pistol** | 3 | Medium range standard issue pistol | 50% | 2 | -1 | 5 | standard issue | Intel. Skill | 0.45 | 9 bullets per mag. |
| * | **AK-47 Rifle** | 6 | Long range rifle. | 60% | 4 | -3 | 10 | add to inventory | Intel. Skill | 7.62x39 | 30 bullets per mag. |
| * | **\*.45 ammo** | 2 | For later version | | | | | add to inventory | | | |
| * | **\*7.62x39 ammo** | 4 | For later version | | | | | add to inventory | | | |
| | | | | | | | | | | | |
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## ENEMY TYPES

| * ENEMY | DAMAGE (HPs) | ENDURANCE (EPs) | EFF. RANGE (meters) | CHANCE TO HIT PLAYER |
|---|---|---|---|---|
| * Large Rat | 2 | 4 | 1 | 50% |
| * Mutant | 4 | 8 | 2 | 60% |

| * ATTRIBUTE | DESCRIPTION | DATA TYPE | BASE | UNIT |
|---|---|---|---|---|
| * Name | Enemy Name | String | | |
| * Damage_Delt | Amount of damage delt per turn | | | |
| * Endurance_Stat | Strength level | | o | |
| * Alive | Alive (True) / Dead (False) | Boolean | T | T / F |
| * Effective_Range | Number of meters attack can take place | int | o | |
| * Accuracy | Percent chance to hit player | int | o | |

| * Logic | | | | |
|---|---|---|---|---|
| * Attack( points ) | | | | |
| * Move( cellCount ) | | | | |
| * LosePoints( int ) | Deduct {int} points from Endurance stat | | | |
| * Die() | | | | |
| | | | | |
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| * **\* Enhancements to save for LATER VERSIONS** | | | | |

## SKILLS

| | SKILL | SHORT NAME | DESCRIPTION | BASE STAT | INCREASED BY | PRIMARY SKILL | SECONDARY SKILL |
|---|---|---|---|---|---|---|---|
| * | Intelligence Skill Level | ISP | Determines Hack Skill and Gun Skill | 0 | Book.read() | Gun Attack | Hack |
| * | Strength Skill Level | SSP | Determine Carry Weight and Melee Ability | 0 | Book.read() | Melee | Carry Weight |
| * | Endurance Skill Level | ESP | Determines HP and EP | 0 | Book.read() | Health | EP |
| | | | | | | | |
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| * | **\* Enhancements to save for LATER VERSIONS** | | | | | | |