Senior Project Use Case Model

The study of the shadowed:



Void Pointer Studios

Submitted By:

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Submitted To:

Calvin Caldwell

10/11/2018 Version 1

Signatory Page	
Document accepted by: Calvin Caldwell	
Signature	Date
Document submitted by: Carl Lowther	
Signature	Date

Carl Lowther ii

Revision History

Version	Date	Author	Company	Comments
0.5	5/20/18	Carl Lowther	Void Pointer Studios	First Draft
1	6/6/18	Carl Lowther	Void Pointer Studios	Logo, H/S
				platform
1.1	10/11/18	Carl Lowther	Void Pointer Studios	Updated to
				correct email,
				Added
				functional
				requirements
				for menus

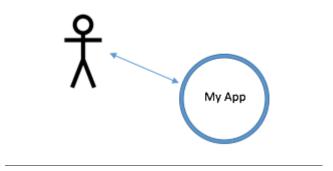
Carl Lowther iii

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Climbing Objects\UC 049	
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Opening Doors\UC 052	
Picking Locks\UC 054	
Pick Safes\UC 056	
Stealing Objects\UC 058	
Knocking Out Enemies\UC 060	
Putting Out Light Sources\UC 062	
Using Switches\UC 064	
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Context Diagram



Video Game Player

- Edit settings
- Choose a level
- Quit game
- Access in game menu
- Close in game menu
- Exit Level
- Edit setting in game
- Look around
- Walk
- Slow walk
- Run
- Crouch
- Jump
- Climbing ladders, ropes, and chest high objects

- Open doors
- Pick locks
- Opening combination locks
- Picking up objects
- Steal objects off of enemies
- Look through inventory
- Use Items in inventory
- Knock out enemies
- Putting out lights
- Use buttons and switches
- Finish Level
- Lose level
- View score after level
- Exit to main menu
- Continue to next level

Use Case Catalog

Use Case ID	Use Case Name	Description
005	Play First Level	Video game player starts the game
006	Main Menu Interaction	Go back to the main menu from the level select menu
010	Main Menu Settings	Allow the player to change settings from the main menu
011	Quit Game	Quit the game from the main menu
015	(Adds) Settings Menu	Allow the player to change settings
020	In-Game Menu	Opens the in-game menu
022	Resume Game	Resumes the game
024	Open Setting Menu	Allow the player to change setting from ingame menu
026	Quit Level	Quits the level
028	Quit Game from Level	Quits the game from the level
035	After Level Info	Shows the player progress info after the level is finished
037	Go to Next Level	Load the next level
039	Quit to Main Menu	Quits from the after level screen to the main menu
045	Player Looking	Allows the player to look around in a 3D world
046	Player Movement	Uses keyboard input to walk around
047	Player Crouching	Allows the player to crouch, making them smaller
048	Player Jumping	Allows the player to jump in-game
049	Climbing Objects	Allows the player to climb objects

050	Player Inventory	Access and look through inventory
052	Opening Doors	Allows player to open doors
054	Picking Locks	Allows player to pick locks
056	Pick Safes	Allows player to pick safes
058	Stealing Objects	Stealing objects in the level or off of enemies
060	Knocking Out Enemies	Allows the player to knock out enemies
062	Putting Out Light Sources	Allows the player to put out light sources
064	Using Switches	Allows the user to use switches to toggle objects in the level
065	Enemy AI	Algorithms for how the enemies should behave
080	Level	The information need for a level
085	Database	Hosting and accessing database
090	Hosting the Game	Allows access to the game off of the cloud

Actor Catalog

Name	Туре	Description
Player	Person	The player who is interacting with the video game.

Features Verification Matrix

Features #'s	Use Case ID	Use Case Name
1.A	045	Player Looking
1.B	046	Player Movement
1.C	047	Player Crouching
1.D	048	Player Jumping
1.E	049	Climbing Objects
2.A	050	Player Inventory
2.B	052	Opening Doors
2.C.i	054	Picking Locks
2.C.ii	056	Picking Safes
2.D	058	Stealing Objects
2.E	060	Knocking Out Enemies
2.F	062	Putting Out Light Sources
2.G	064	Using Switches
2.H	020	In-Game Menu
3	065	Enemy AI
4	065	Enemy AI
5	065	Enemy AI
6	065	Enemy AI
7	080	Level
8.A.i.1	005	Play First Level
8.A.i.2	006	Back to Main Menu
8.A.ii	010	Main Menu Settings
8.A.iii	011	Quit Game

8.B.i	022	Resume Game
8.B.ii	024	Open Settings Menu
8.B.iii	026	Quit Level
8.B.iv	028	Quit Game from Level
8.C	015	(Adds) Settings Menu
8.D.i	035	After Level Info
8.D.ii	037	Go to Next Level
8.D.iii	039	Quit to Main Menu
9.A	035	After Level Info
9.B	085	Database
9.C	090	Hosting the Game

Use Case Specifications (Use Case\Number)

Play First Level\UC 005

General Information	
Use Case Name\Number: Play first level UC 005	Responsible Analyst: Carl Lowther
Subject Area: Main Menu Interaction	
Description: Video game player starts the game	

Requirements/Feature Trace		
REQ# Requirements Name and / or Short Description		
8.a.i.1 To allow the player to start the game		

Revision History		
Author	<u>Date</u>	Comments
Carl Lowther	10/7/18	First Draft
Carl Lowther	10/11/18	Added timing and volume information

			Insertion Point	ts in other	Use C	ases (Adds Or	ılv)			
Use Ca	se Nan	ie	Use Case Num		050 0		tep Inserted	After		
N/A							•			
		L		I						
				Acto	rs					
	Name		Person/Syste	em			Brief Descrip			
Player			P		The pl	ayer that's intera	ecting with the	video gam	ie.	
				Pre-Cone	ditions					
#			Description		uitions					
	n displa	ys the mair		<u>on</u>						
01 5,5001	u.sp.r.	., 5 0.10 111411								
Start Stimulu	ıs									
Player selects s		ne								
			Use (Case Main	Course	e Steps				
Number			Description			Adds/Alt Na	me/Number	В	us Rule#	
01	Syste	m displays	level select menu							
02		er selects le								
03	Syste	m displays	a loading screen until	level is load	ed					
			T.		1 10.0					
T (*	G*4	··	E	xception C				<u> </u>	4 1 1 \ 4 14	TIC #
N/A	n Situa	ttions		Actio	n(s) on	Exception			Adds\Alt	UC#
IN/A										
				Post-Con	ditions					
#					scriptio					
	Level is	loaded and	the player can begin						-	
				Candidate		ts				
Class/Object 1	Name		<u>I</u>	Descriptions					sible	
Main Menu		A 1:-4 - £1	II -1					Attr	<u>ibutes</u>	
Level Menu			JI elements JI elements							
Devel menu		11 1150 01 0	31 0101110 1110				I			
				Assump	tions					
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				Raised		<u>By</u>	Verifie	d		
N/A										
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	Timing Information							
#	At/ Between	Step(s)	Timing Unit	<u>Minimum</u>	<u>Average</u>	Maximum	<u>Comments</u>	
1	At	03	seconds			6	Don't want to take to long to load the level.	

	Volume Information								
#	Step #	<u>Unit of</u> Measure	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>	Comments			
1	03	Mb			20mb	SWAG of data needed to load level			
		·							

Back to Main Menu\UC 006

rmation
Responsible Analyst : Carl Lowther

Requirements/Feature Trace						
REQ#	REQ# Requirements Name and / or Short Description					
8.a.i.2	i.2 Go back to main menu from level select menu					

Revision History				
Author	Date	Comments		
Carl Lowther	10/11/18	First Draft		

Insertion Points in other Use Cases (Adds Only)						
Use Case Name	Use Case Number	Step Inserted After				

Actors					
Actor Name Person/System Brief Description					
Player	P	The player that's interacting with the video game.			

	Pre-Conditions Pre-Conditions					
#	Description					
1	System displays the main menu					

	Start Stimulus												
Pla	yer selects	start g	game										
					Heo C	Soco Mo	in Cour	50 S1	tons				
Nu	mber_	Desc	cription		Use C	Case Main Course Steps Adds/Alt Name/Number			Bus	Bus Rule#			
01				ys level selec									
02				Go back to m		nu							
03 System displays the main menu													
	Exception Conditions												
Ex	ception Si	tuatio	ons	Action(s)) on Ex	ception	<u>l</u>					Adds #	Alt UC
n∖a													
						Post-C	Condition	16					
#	Desc	riptio	n			1 051-0	onunio	13					
<u></u>	2000	110110	<u></u>										
						Candid	ate Obje	ots					
Cla	ss/Object		Descri	otions		Canulu	ate Obje	cis		Pos	sible		
Nai				, , , , , , , , , , , , , , , , , , , 							ibutes	<u>s</u>	
	in Menu		A list of	UI elements									
Lev	el Menu		A list of	UI elements									
						A ggy	mntions						
#	Assump	tion				Date	mptions 1	Raise	-d	Date		Verified	l Rv
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	Per: Hour: Day: Week: Month: Other: Once or twice per game												
Timing Information													
#	<u>At/</u>		Step(s)	Timing	Minir		Avera		Maximum	Comn	ients		
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	Volume Information							
#	Step #	Unit of Measure	Minimum	<u>Average</u>	<u>Maximum</u>	Comments		
	N∖A	1/1045410						

Main Menu Settings\UC 010

General Information						
Use Case Name\Number: Main menu settings UC 010 Subject Area: Main Menu Interaction Description: Allow the player to change setting from main menu	Responsible Analyst : Carl Lowther					

Requirements/Feature Trace						
REQ#	REQ# Requirements Name and / or Short Description					
8.a.ii	Go to settings					

Revision History					
Author Date Comments					
Carl Lowther	10/11/18	First Draft			

Insertion Points in other Use Cases (Adds Only)					
Use Case Name	Use Case Number	Step Inserted After			

Actors					
Actor Name	Person/System	Brief Description			

Pre-Conditions					
#	Description				
01	01 System displays the main menu				

Start Stimulus				
Player selects settings				

	Use Case Main Course Steps						
Number	Description	Adds/Alt	Bus Rule#				
		Name/Number					
01	Open settings Menu	Settings menu UC 015					

Exception Conditions													
Exce	ption Situa	<u>tions</u>	Act	ion(s)	on Exc	eption						Adds	\Alt UC
												#	
						Post-C	onditio	ns					
<u>#</u>	Descript												
01	In setting	gs menu											
	Candidate Objects												
	Object/	Descrip	tions								Possib		
Name	<u>}</u>										attribu	tes	
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	Volume Information												
<u>#</u>	Step #	Unit of Minimum				Aver	age	Ma	<u>ximum</u>	Cor	<u>nments</u>		
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Quit Game\UC 011

General Information					
Use Case Name\Number: Quit Game UC 011 Subject Area: Main menu Description: Quit the game from the main menu	Responsible Analyst : Carl Lowther				

Requirements/Feature Trace						
REQ#	P# Requirements Name and / or Short Description					
8.a.iii	Quit the game					

Revision History					
Author Date Comments					
Carl Lowther	10/11/18	First Draft			

Insertion Points in other Use Cases (Adds Only)					
Use Case Name	Use Case Number	Step Inserted After			

Actors					
Actor Name	Person/System	Brief Description			
Player P		The player that's interacting with the video game.			

	Pre-Conditions Pre-Conditions					
#	Description					
1	System displays the main menu					

	Start Stimulus	
Player Selects quit game		

	Use Case Main Course Steps							
Number	<u>Description</u>	Adds/Alt	Bus Rule#					
		Name/Number						
01	Shut down the game							

Exception Conditions					
Exception Situations	Action(s) on Exception	Adds\Alt UC #			

	Post-Conditions						
#	Description						
01	The game is no longer running						

	Class/Object Descriptions Name						Candidate Objects Possible attributes								
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#	# Assumption						Date Raise		Raised			ate erified	Verified	l By	
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								+		+					
	(Adds) Settings Menu\UC 015														
							G	eneral	Inform	ation					
Sub	Use Case Name\Number: (Adds) Settings Menu UC 015 Subject Area: Settings menu Description: Allow the player to change settings														
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RE	0#	Rea	nirem	ents	Name	and /		rement rt Desci		ure Ir	ace				
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Revision History							
Author Date Comments							
Carl Lowther	10/11/18	First Draft					

Insertion Points in other Use Cases (Adds Only)							
Use Case Name Use Case Number Step Inserted After							
Main menu settings	010	1					
In-game Menu	024	1					

Actors						
Actor Name Person/System Brief Description						
Player	P	The player that's interacting with the video game.				

	Pre-Conditions				
#	Description				
01	At main menu or in game menu				

Start Stimulus	
Player opens settings	

	Use Case Main Course Steps						
Number	Description	Adds/Alt	Bus Rule#				
		Name/Number					
01	Show main menu						
02	Edit audio	015.1					
03	Exit settings	015.5					

Exception Conditions					
Exception Situations	Action(s) on Exception	Adds\Alt UC			
		<u>#</u>			

	Post-Conditions Post-Conditions					
#	Description					
01	Setting menu is open					

	Candidate Objects					
Class/Object Name	<u>Descriptions</u>	Possible attributes				
Settings menu	A list of UI objects					

	Assumptions						
#	Assumption	Date Raised	Raised By	Date Verified	Verified By		

					Is	ssues						
#	<u>Issue</u>				<u>Date</u> <u>Raised</u>		_	<u> Date</u>	Verified	l By		
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					Other	Comme	nts					
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#	At/	Step(s)	Timing	Minir		Avera		Maximu	m	Comments	s	
	Between		Unit	-				-			=	
1	At	2	Seconds					0.05		Changing t		e should
										not take to	long	
<u> </u>								1				
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				V	olume	Inform	ation					
#	Step #	Unit of Measure		nimum_	Avei	rage	Ma	ximum	Coı	mments		
N\A	Λ .	11104154110										
			A 1	4 4 . 4	7	<u>C</u>	11.6	rmation				
Des	ernate Course scription: Cha son for Execu	nge audio v	nber: Edit au olume for ga	dio 015.1				on:				
Ct.	n Ingorto J A C	or.			Insert	tion Poi	nt					
01	p Inserted Aft	eı										
UI												
					Pre-C	onditio	ns					
1.	Settings me	nu is open										
2.							-					
						<u>C</u>	0.					
	C. D.			Alt	ernate	Course			- 11		D 1 () (1
#	Step Descri						A	lds Use Ca	ise #	Busines	s Rule(s)#	<u>.</u>
1.	Player chan	ges volume			_							
2.												
3.												
4.												
					D.	7 70.0						
1	Sottings man	nu is still	200		Post-C	Conditio	ns					
1. 2.	Settings me	nu is stili o <u>r</u>	эеп									
۷.	l											

Δ lt	ernate Co	urse Name\Num	Alternate Course Go	eneral	Information			
	Alternate Course Name\Number: Exit menu 015.5 Description: Exit settings menu							
	Reason for Execution: Non Exception: Exception:							
			Insertion	n Poin	t			
Ste	p Inserted	l After						
01								
			Pre-Con	dition	S			
1.	Setting	s menu is open						
2.								
			Alternate Co	nureo (Stone			
	a. 5		Alternate Co	Jui se s				
<u>#</u>	Step D	<u>escription</u>			Adds Use Case #	Business Rule(s)#		
1.	Player	exits menu						
2.	, ,							
3.								
4.								
	ı		Post-Cor	dition	S			
1.	Setting	s menu is closed						
2.								
			In-Game M	enu\l	UC 020			
			General In	format	cion			
Sub	ject Area	me\Number: Ir a:In-Game ment :Opens in-game		Res	ponsible Analyst : Car	rl Lowther		
				1				
			Requirements/1	Featur	e Trace			
RE	Q#	Requirements	Name and / or Short Descrip					
2.h		Player opening	in-game menu					
		<u> </u>						
			Revision	Histor	y			
		<u>ithor</u>	<u>Date</u>		ments			
Car	l Lowthe	r	10/11/18	First	Draft			
			Insertion Points in other	Use C	ases (Adds Only)			
	Use Cs	ise Name	Use Case Number		Inserted After			
			Coo Cuse I (umber	Step				
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					A -4					
Act	or Name			Person/System	Actor		Description			
Play				P			ayer that's interac	ting with	the video a	ame
Tiu	yCI			1		THC p	ayer that 3 interac	ting with	the video gi	anno.
			•		•					
					Pre-Cond	itions				
#				Desc	ription					
01	In gan	ne								
					Start Stir	aulua				
Dlax	yer hits the	a accor	na kay		Start Stil	nuius				
1 lay	yei mus me	cscap	е кеу							
				Use C	ase Main (Course	Steps			
Nui	mber	Desc	ription				Adds/Alt		Bus Rule#	ŧ
							Name/Number		•	
01			es game							
02		Syste	em display:	s in-game menu						
				E	xception Co	nditi	an e			
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	1				Post-Cond	litions				
#		riptio								
01	In-ga	ame m	enu is oper	1						
					Candidate (Ohiec	ts			
Cla	ss/Object		Descript		Canalate	Objec	13	Poss	sible	
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In-g	game ment	u	A list of	UI elements						
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					Other Con	ıment	S			
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	t hor l Lowther		The in-	game menu will be			ne player needs to	pause the	game,	10/11/18
			The in-				ne player needs to	pause the	game,	10/11/18
			The in-	game menu will be			ne player needs to	pause the	game,	10/11/18
			The in-	game menu will be ttings or quit the ga	me or level			pause the	game,	10/11/18
Car	l Lowther		The inedit set	game menu will be ttings or quit the ga	me or level	Execu	tion	pause the		
Car	l Lowther		The in-	game menu will be tings or quit the ga	equency of Maximu	Execu	tion Average:	pause the	(OR)Fixed	

				Timing 1	Information		
#	At/	Step(s)	Timing	Minimum	Average	Maximum	Comments
	Between		<u>Unit</u>				
1	Between	1,2	Seconds			0.1	Should pause the game and bring up the in-game menu quickly.

	Volume Information					
#	Step #	Unit of Measure	Minimum	<u>Average</u>	<u>Maximum</u>	Comments
N∖A						

Resume Game\UC 022

General Information						
Use Case Name\Number : Resume Game UC 022 Subject Area : In-game menu Description : Resume the game	Responsible Analyst : Carl Lowther					

	Requirements/Feature Trace					
REQ#	Requirements Name and / or Short Description					
8.b.i	Resume the game					

Revision History						
Author Date Comments						
Carl Lowther	10/11/18	First Draft				

Insertion Points in other Use Cases (Adds Only)						
Use Case Name Use Case Number Step Inserted After						

Actors					
Actor Name	Person/System	Brief Description			
Player	P	The player that's interacting with the video game.			

	Pre-Conditions				
#	Description				
1	Game is paused				
2	In-game menu is open				

	Start Stimulus
Player selects resume game	

						Use Ca	ise Ma	in Cour							
Nu	<u>mber</u>	Des	<u>scription</u>						Adds/Alt Name/Number				Bus	Rule#	
01		Close in-game menu													
02	Un pause game														
	<u> </u>														
						Exc	ception	n Condi	tions						
Ex	Exception Situations Action(s) on Exception Adds\Alt UC #														
							Post-C	Conditio	ns						
#	Desc	ripti	on												
1	The i	in-gaı	me menu i	s close	d										
2	The	game	is no long	ger paus	sed										
			,												
						C	andid	ate Obje	ects						
Cla	ss/Object		Descri	ptions				<u> </u>				Poss	ible		
Naı			-	_								attril			
							Assu	mptions	5						
#	Assump	otion					Date]	Raise	d	I	Date	,	Verifie	d By
	_						Raise	<u>d</u>]	B <u>y</u>			/erified			
							Is	ssues							
#	<u>Issue</u>						Date]	Raise	d	I	<u> Date</u>	1	Verifie	d By
							Raise	Raised By Verified							
						(Other (Comme	nts						
Aut	<u>thor</u>		Com	ment											Date
						Free	quency	of Exe	cutio	n					
Fre	quency:		Min	imum:			Maxi	mum:	1	Aver	age.		(OR	R)Fixed:	
Per		F	Hour:	Dav	v: 🗍	Weel			th: [er in gam			
			- · · · · ·		<u>, </u>										-
						Ti	ming 1	Informa	tion						
#	At/		Step(s)	Timi	ng	Minim		Avera		Maxim	ım	Comme	ents		
-	Between		<u> </u>	Unit	_				•						
1	Between		1,2	Secon	nds					0.1		Should	un-pa	ause the	game and
			Í									close th			
L	quickly														
	•		<u> </u>		J.			•		•					
						Vo	lume	Informa	tion						
#	Step #		Unit of		Mini		Avei			ximum	Coi	mments			
-			Measure												

Open Settings Menu\UC 024

General Information				
Use Case Name\Number: Open Setting menu UC 024	Responsible Analyst : Carl Lowther			
Subject Area: In-game menu				
Description : Allow the player to change setting from in-				
game menu				

	Requirements/Feature Trace				
REQ#	REQ# Requirements Name and / or Short Description				
8.b.ii	Go to settings				

Revision History						
Author Date Comments						
Carl Lowther	10/11/18	First Draft				

Insertion Points in other Use Cases (Adds Only)					
Use Case Name	Use Case Number	Step Inserted After			

Actors					
Actor Name Person/System Brief Description					
Player	P	The player that's interacting with the video game.			

	Pre-Conditions					
#	# Description					
01	In in-game menu					

	Start Stimulus
Player selects settings	

	Use Case Main Course Steps					
Number	Description	Adds/Alt	Bus Rule#			
		Name/Number				
01	Open settings menu	Settings menu UC 015				

Exception Conditions			
Exception Situations	Action(s) on Exception	Adds\Alt UC #	

	Post-Conditions				
#	Description				
1	In settings menu				

	Candidate Objects													
Clas Nan	ss/Object ne		Descri	otions								Possib attribu		
								mption		•		<u>.</u>	T7 100	1 D
#	Assum	ption	1				Date Raise		Raise By	<u>ed</u>		ate erified	Verified	<u>1 By</u>
ш	Lague							ssues	Daiss	, d	П	ata	Varifica	1 D.,
#	<u>Issue</u>						Date Raise	d	Raise By	<u>ea</u>		ate erified	Verified	<u>1 Бу</u>
							Other	Comm	ents					
Aut	hor		Com	ment			Other	Comm						Date
						Fre	equency		ecutio:					
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						Т	iming	Inform	ation					
#	At/		Step(s)	Tim	ing	Minir		Aver		Maxim	um	Commen	ts	
	Betwe	een		Unit										
N∖A	-													
						V	olume	Inform	ation					
#	Step #	#	Unit of		Min	imum	Ave			aximum	Con	nments		
_	<u> </u>	_	Measure							····				
N∖A	-													
						Qı	uit Le	evel\U	C 02	26				
						C	eneral	Inform	ation					
	G N	13.7	. 1 0	*. T	1.110		епегат					1.7 .1		
	Case Nar ject Area		lumber : Qu	iit Lev	ei UC	026		K	espons	sible Anal	yst : C	arl Lowthe	er	
Des	Description : Quit Level													
							iremen			race				
REC	Q #	Req	uirements	Name	and/	or Sho	rt Desc	ription						
8.b.i	iii	Quit	the curren	t level	and go	back to	the ma	ain men	ıu					
<u> </u>														

	Revision History				
Author	Date	Comments			
Carl Lowther	10/11/18	First Draft			
	Insertion Points in other	Use Cases (Adds Only)			
Use Case Name	Use Case Number	Step Inserted After			

Actors			
Actor Name	Person/System	Brief Description	
Player	P	The player that's interacting with the video game.	

	Pre-Conditions		
#	Description		
01	In in-game level		

	Start Stimulus	
Player selects Quit level		

	Use Case Main Course Steps				
Number	Description	Adds/Alt Name/Number	Bus Rule#		
01	Close in-game menu				
02	Close level				
03	Open main menu				
04	System displays main menu				

Exception Conditions			
Exception Situations	Action(s) on Exception	Adds\Alt UC #	

Post-Conditions			
#	Description		
01	At main menu		

	Candidate Objects							
Class/Object Name	<u>Descriptions</u>	Possible attributes						

	Assumptions								
<u>#</u>	Assumption	<u>Date</u> Raised	Raised By	<u>Date</u> Verified	Verified By				

							Is	sues						
<u>#</u>	<u>Issue</u>						<u>Date</u>		Raise	<u>ed</u>		<u>Date</u>	Verified	l By
							Raisec	1 1	<u>By</u>			<u>Verified</u>		
	Other Comments													
Aut	<u>thor</u>		Com	<u>iment</u>										Date
														l
	Frequency of Execution													
	equency:			imum:				mum:		Avei			OR)Fixed	:
Per	<u>:</u>	Ho	ur: 🔲	Day	у: <u> </u>	Wee	k: 🗌	Mor	nth:	_ Oth	er: C	nce per leve	l	
						Ti	iming I	nforma	tion					
#	At/	Sto	ep(s)	Timir	ng	Minin		Avera		Maximu	ım	Comments	s	
	Betwee	n		Unit										
1	Between	n 2,3	3	Secon	ıds					0.5		Shouldn't to level	take to lor	g to close
2	At	4		Secon	nds					0.1		Shouldn't	take to lor	g to open
												the main m	ienu	
						V	olume I	nforma	tion					
#	Step #		<u>iit of</u> easure		Mini	mum	Aver	age	Ma	ximum	Co	mments		
N														
\														
Α														
					Qui		me fro			AUC 028	3			
	Case Na				ne from	1 Level	UC 028	Re:	spons	sible Analy	st : (Carl Lowther		
	oject Area scription:				1									
D.F.	0,11	D .		N.T.			rement		re Tr	ace				
RE		Requir				or Shor	t Descr	<u>iption</u>						
8.b.	.1V	Quit Ga	me fro	m Leve	:I									
							Dovisi -	n Uiata	MY 7					
An	thor			Date			Revisio		ry ımen	ıts				
_	l Lowther	•		10/11	/18			_	Dra					

				Insertion Point	s in other	Use Ca	ises (Adds Only)				
Use	Case Na	me		Use Case Number			Inserted After				
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.	N.T.		T	D /C /	Acto		D '.'				
	or Name			Person/System P			Description layer that's interacting	a vrith	tha vi	daa aan	
Play	yeı			1		THE P	iayei mai s mieracin	ig with	the vi	uco gan	iic.
					Pre-Con	ditions					
#				Descr	ription						
01	In in-	game r	nenu								
					Start Sti	mulus					
Play	yer selects	quit g	ame								
		1		Use C	Case Main	Course					
Nui	<u>mber</u>	Desc	ription				Adds/Alt		Bus	Rule#	
0.1		C1. 4	down the				Name/Number				
01		Snut	down the	game							
				E	xception C	Conditio	ons				
Ex	ception S	ituatio	ns	Action(s) on Ex							S\Alt UC
										<u>#</u>	
					Post-Con	J:4:					
#	Dose	criptio	n		Post-Con	aitions					
01				er running							
01	THE	gaine i	s no longe	a ruming							
					Candidate	Objec	ts				
	ss/Object		Descrip	tions				Poss			
Nar	<u>me</u>							attri	<u>butes</u>		
					Assump	ntions					
#	Assum	ntion			Date		aised Da	te	1	/erified	l Bv
-					Raised	By		rified	-		<u> ,</u>
,,	Issues									l D	
#	# Issue Date Raised By Date Verified Verified Date Verified Date Date Paised Date Date Paised Date Date								l By		
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					Other Co	mment	S				
Aut	thor_		Comr								Date
										•	

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	quency:			imum:		3371		imum:	a. E	Avera		(OR)Fixed: 1	
Per	•		Hour: 🔲	Day	y: 🔲	Weel	к: 🗀	Mon	tn: L	_ Otr	er: P	er game	
						Ti	mina l	nforma	tion				
#	At/		Step(s)	Timir	10	Minim		Averag		Maximi	ım	Comments	
<u>11</u>	Between	n	Step(s)	Unit	15	141111111	um	Averag	<u>5C</u>	Maxim	1111	<u>comments</u>	
1	At	-	1	Secon	ds					0.5		Time to close the application	
-	711		-	Secon						0.5		Time to close the application	
	•	•								•			
						Vo	lume l	Informa	tion				
#	Step #		Unit of		Mini	mum	Aver	age	Ma	ximum	Co	mments	
			Measure										
N													
\													
A													
							_		•				
						After	Leve	d Info	UC	035			
						Ge	neral	Informa	tion				
Llaa	Caga Na	ma\X	Number: A	ftor Lo	vol Inf					ibla Anal	rat : (Carl Lowther	
			ter Level S		vei iiii	0 00 03	3	Res	spons	ible Allai	yst . C	Carl Lowiner	
			ws the play		ress in	fo after t	he leve	-1					
	nished	Silo	ns the play	or prog	1055 111	io unter t							
								-					
								s/Featu	re Tr	ace			
RE	Q #	Req	uirements	Name	and /	or Short	t Desci	<u>iption</u>					
8.d.	i	Sho	w the after	level ir	ıfo								
9.a		Sho	w the after	level ir	nfo and	l allow th	ne user	to save	his sc	ore to the	clou	d	
- 101												-	
				-		I	Revisio	n Histor					
	thor 1			Date	/1.0			Com					
Car	l Lowther			10/11	/18			First	Draf	ī			
								-					
				In	sertio	Points	in oth	er Use C	ารคร	(Adds O	nlv)		
Use	Case Na	me				umber	III Oth			rted Afte			
OBC CASC I VALLED				<u>osc</u> c	2436 11	umber		эсер	11150	1104 / 1110	<u>. </u>		
Actors													
Act	or Name			Perso	n/Sys	tem			Brief Description				
Pla				P							terac	ting with the video game.	

							onditi	ons					
#					Desc	ription							
01	Player	has fi	inished a	level									
						Stont	Stimu	lus					
The	After leve	el scre	en is disn	laved		Start	Sumu	ius					
THE	Titter iev	51 5010	en is disp	nayea									
					Use C	Case Ma	ain Co	urse S	Steps				
Nur	nber	Desc	ription					1	Adds/Alt		-	Bus Rule#	
									Name/Numbe	r			
01			system di ng the lev	isplays the sc el	ore that	the play	yer got						
02		Allo	w user to	upload his so	core to t	he seve	r						
				<u> </u>		xceptio		dition	18				
Exc	eption Si	tuatio	ns	Action(s) on Ex	ception	<u>l</u>						s\Alt UC
												#	
						Post-C	Tandit	ona					
#	Dosc	riptio	n			Post-C	Jonait.	ш					
01			l screen i	s onen									
02				heir score									
02	THE	Jiayei	can see t	nen score									
						Candid	ate Ol	piects					
Clas	ss/Object		Descri	ptions				j			Possi	ble	
Nan				•							attrib		
Afte	er screen 1	evel	A list o	f UI elements	3								
	<u> </u>												
						Assu	ımptio	ns					
<u>#</u>	Assum	<u>otion</u>				Date Raised Date					Verified	<u>l By</u>	
						Raise	<u>:d</u>	<u>By</u>	By Verifie				
						T							
#	Issue					Date	ssues	Rais	boa	Da	to	Verified	l D _v
<u>#</u>	<u>Issue</u>					Raise	d	By	<u>seu</u>		rified	v ei iiiet	ГБу
						Ittiise	<u> </u>	<u> </u>			meu		
						I.		1				ı	
						Other	Comm	ents					
Aut	hor		Com	ment									Date
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					Fre	equency							
	quency:			imum:			imum		Average			(OR)Fixed:	1
Per		Н	our:	Day:	We	ek:	M	onth:	U Other:	Per	ievel co	mpleted	
	Timing Information												
#	Timing Information												
#	At/ Between		Step(s)	<u>Timing</u> Unit	WIIIII	<u>ııuıfl</u>	Avei	age	Maximum	2	Comme	<u>iits</u>	
1	At	1		Seconds					0.08	-	Shouldn'	t take to lor	ng to
1	Лι	1		Seconus					0.00			users score	
									1		-10 11 1110	35015 50010	
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					1								

	Volume Information								
#	Step #	<u>Unit of</u> Measure	Minimum	Average	<u>Maximum</u>	Comments			
		<u>Measure</u>							
1	2	kb			1	The amount to send to the sever			

Go to Next Level\UC 037

General Information							
Use Case Name\Number: Go To Next Level UC 037 Subject Area: After level screen Description: Load the next level	Responsible Analyst : Carl Lowther						

	Requirements/Feature Trace						
REQ#	Requirements Name and / or Short Description						
8.d.ii	Go to the next level						

	Revision History							
Author	Date	Comments						
Carl Lowther	10/11/18	First Draft						

Insertion Points in other Use Cases (Adds Only)								
Use Case Name	Use Case Number	Step Inserted After						

Actors								
Actor Name	Person/System	Brief Description						
Player	P	The player that's interacting with the video game.						

	Pre-Conditions					
#	Description					
01	In the after level screen					

	Start Stimulus	
Player clicks on next level		

	Use Case Main Course Steps							
Number	Description	Adds/Alt	Bus Rule#					
		Name/Number						
01	System displays a loading screen until level is loaded							

Ex	Exception Conditions Action(s) on Exception Adds\Alt UC #													
													#	
				ı									- I	
							Post-C	onditio	ns					
#	Descrip			1.41	. 1	1	1.	•						
01	I ne Le	vei i	is loaded	and the	piaye	r can be	egin pia	yıng						
						(Candida	ate Obj	ects					
Cla Nai	ss/Object ne		Descri	<u>ptions</u>								Possibl attribut		
							Assu	mptions	3					
#	Assumption	n					Date		Raise	e <u>d</u>	D	ate	Verified	l By
							Raise	d	<u>By</u>		V	<u>erified</u>		
							Is	ssues						
#	Issue						Date]	Raise	e <u>d</u>		ate	Verified	l By
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							Other (Comme	nts					
Aut	thor		Com	ment										<u>Date</u>
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						n n	!! 1	n fo	4 : a					
#	At/	S	tep(s)	Timir	19	Minin		nforma Avera		Maximi	ım	Comment	s	
<u> </u>	Between			Unit					<u>-</u>					
1	At	0	3	secon	ds					6		Don't wan		long to
		-								-		load the le	vel.	
		-												
		T												
										•				
								Informa						
#	Step #	N	Init of Ieasure		Mini	mum	Avei	age_		ximum		<u>nments</u>		
1	03	N	1b				-		20mb SWAG of		AG of data	f data needed to load level		
		-												
		+												
	1	-					1		1					

Quit to Main Menu\UC 039

General Information					
Use Case Name\Number: Quit to Main Menu UC 039 Subject Area: After level screen Description: Quit from after level screen to the main menu	Responsible Analyst : Carl Lowther				

	Requirements/Feature Trace				
REQ#	REQ# Requirements Name and / or Short Description				
8.d.iii	Quit to main menu				

Revision History				
Author	<u>Date</u>	Comments		
Carl Lowther	10/11/18	First Draft		

Insertion Points in other Use Cases (Adds Only)				
Use Case Name	<u>Use Case Number</u>	Step Inserted After		

Actors						
Actor Name	Person/System	Brief Description				
Player	P	The player that's interacting with the video game.				

Pre-Conditions					
#	Description				
01	In after level screen				

Start Stimulus
Player selects quit to main menu

	Use Case Main Course Steps							
Number	Description	Adds/Alt	Bus Rule#					
		Name/Number						
01	Close after level screen							
02	Open main menu							
03	System displays main menu							

Exception Conditions					
Exception Situations Action(s) on Exception					
		<u>#</u>			

Post-Conditions					
#	Description				
01	At main menu				

	Candidate Objects											
Class/Object Descriptions Name				Canuic	iate Obj	ecis			Possib attribu			
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Assumptions												
# Assumption				Date Raise		Raise By	<u>:d</u>		<u>Date</u> Verified	Verifie	<u>d By</u>	
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Aut	hor	Con	ıment		Other	Comme	1115					Date
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						Informa	tion					
#	At/	Step(s)	Timir	ng <u>Mi</u>	<u>nimum</u>	Avera	ge	Maxim	<u>um</u>	Comment	<u>ts</u>	
1	Between Between	1,2	Unit Secon	ds				0.5		Shouldn't after level		ng to close
2	At	3	Secon	ds				0.1			take to lo	ng to open
					Valuma	Inform	ıtian.					
#	Step #	Unit of		Minimun		rage	_	ximum	Co	mments		
<u>"</u> N\A		Measure		141111111111111111111111111111111111111	1 1111	<u>ruge</u>	1716	<u> </u>	20	<u> </u>		
		1					<u> </u>					
		<u> </u>					1					
	DI I LI MICIOAN											
	Player Looking\UC 045											
	General Information											
	Case Name\l			ooking UC	045	Re	spons	sible Anal	yst : (Carl Lowthe	r	
Sub	ject Area : Pl	ayer Movei	nent	_			_					
	cription : All	owing the p	layer to	look aroun	d in a 3D							
wor	ıa											
						1						

Requirements/Feature Trace						
Requirements Na	me and / or Short Descrip	otion				
Use the mouse to l	ook around					
	D 11	W.				
		·				
<u>D</u> :	<u>ate</u>	Comments				
10	0/11/18	First Draft				
	Use the mouse to l	Requirements Name and / or Short Descrip Use the mouse to look around Revision Date 10/11/18				

Insertion Points in other Use Cases (Adds Only)						
Use Case Name Use Case Number Step Inserted After						

Actors						
Actor Name Person/System Brief Description						
Player P		The player that's interacting with the video game.				

	Pre-Conditions Pre-Conditions						
#	Description						
01	In game						

	Start Stimulus
Player wan	nts to look around

	Use Case Main Course Steps							
Number	Description	Adds/Alt	Bus Rule#					
		Name/Number						
01	Take input from mouse to look around							

Exception Conditions					
Exception Situations	Action(s) on Exception	Adds\Alt UC #			
		_			

	Post-Conditions				
<u>#</u>	# Description				
01	The player is now looking somewhere else				

	Candidate Objects					
Class/Object Name	<u>Descriptions</u>	Possible attributes				

Assumptions															
# Assumption								шриоп	Raised]	Date Verified By		ied By	
							Raised		By			<u>Verified</u>			
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Issues															
# Issue							Date Raise	d	Raised By			<u>Date</u> Verified	Verified By		
							<u>ranseu</u> <u>By</u>		<u> </u>	-1		<u>v et meu</u>			
Other Comments															
Aut	hor			ment			Date								
Carl Lowther While in game we will co								onstantly check if the player has moved their mouse 10/11/18							
						Fre	equency	of Exe	ecutio	n					
Frequency: Minimum: Maximum: Average: (OR)Fixed:															
Per: Hour: Day: Week: Month: Other: see comments															
						T	iming l	Inform	ation						
<u>#</u>			Step(s) Timin		ng <u>Minir</u>		num Avei		age	ge Maximum		<u>Comments</u>			
1	Between 1 At			Unit seconds						0.016		Player should be moved as			
		01									quickly as possible				
		1													
#	Stop #	II.	it of		Min	<u>V</u> imum	olume 1			vimum	Co	mments			
#	Step #		<u>Unit of</u> Measure				Avei	age	<u>Maximum</u>		<u>C0</u>	mments			
N∖A	N∖A														
	•														
Player Movement\UC 046															
	Trayer Movement (oc 040														
	0.31	131 :		1 .			eneral :					0 11 3			
	Case Nam ject Area:				lovem	ent UC	046	R	espons	ible Analy	/st : (Carl Lowther	•		
	cription : U				to wall	k aroun	d								
						Rean	irement	ts/Feati	ure Tr	ace					
RE	Q# <u>I</u>	Require	ements	Name	and /		rt Desci								
1.b															

	Revision History							
Author	Date	Comments						
Carl Lowther	10/11/18	First Draft						
	Insertion Points in ot	her Use Cases (Adds Only)						
Use Case Name	Use Case Number	Step Inserted After						

Actors							
Actor Name	Person/System	Brief Description					
Player	P	The player that's interacting with the video game.					

	Pre-Conditions						
#	Description						
01	In game						

Start Stimulus	
Player wants to move	

Use Case Main Course Steps									
Number	Description	Adds/Alt	Bus Rule#						
		Name/Number							
01	Read keyboard input to move the player								

Exception Conditions							
Exception Situations	Action(s) on Exception	Adds\Alt UC #					

	Post-Conditions						
#	Description						
01	1 The player is now in a new location						

Candidate Objects							
Class/Object							
<u>Name</u>							
Player Movement		Velocity, Velocity					
		direction, Is on the ground,					
		speed					

	Assumptions								
#	<u>Assumption</u>	Date Raised	Raised By	<u>Date</u> <u>Verified</u>	Verified By				

·
Issues
133463

#	<u>Issue</u>						Date Raise					<u>Verified By</u>		ied By
			1 ~				Other (Comm	ents					-
_	t hor l Lowthe			ment			a a t a m t l v v	ahaalr	if the	mlarran haa	d	the keyboard	al .	<u>Date</u> 10/11/18
Cai	Lowine	I	VVIIII	e in gai	ne we will	COI	istantiy	check	n me	piayei iias	usea	the keyboar	<u>u</u>	10/11/18
						Fre	quency	of Ex	ecutio	n				
Fre	quency:		Min	imum:			Max	imum:		Avera			R)Fixe	d:
Per	:	I	Hour:	Day	y: 🔲 '	Wee	k: 🗌	Me	onth:	Oth	er: S	ee comments	3	
						T	:: <u> </u>	6	4.º					
#	At/		Step(s)	Timir	ıσ M		iming l num	Aver		Maximu	m	Comments	2	
<u> </u>	Betwee		<u>Step(s)</u>	Unit	1 <u>g</u> 141	111111	iluiii	AVCI	age	Maximu	111	Comments	<u> </u>	
1	At		01	secon	ds					0.016		Player show	ıld be n	noved as
												quickly as		
												<u> </u>		
						V	olume 1	nforn	ation					
#	Step	#	Unit of		Minimu			Average Maximum Comments						
_		_	Measure		_									
N\A	1													
					Pla	yer	· Cro	uchir	ng\U(C 047				
						G	eneral l	Inforn	ation					
Sub Des	ject Area	ı : Play	yer Moven	nent	ouching U			R	espons	sible Analy	st : (Carl Lowther		
DE	0#	D	•	NI.	Re	qui	rement	s/Feat	ure Tr	ace				
REQ# Requirements Name and / or Short						t Desci	iption							
1.c Allows the player to crouch														
				Revisio										
	thor	<u>-</u>		<u>Date</u>	/10				mmen					
Car	Carl Lowther			10/11	/10			FII	st Drai	ıı				
								•						

Insertion Points in other Use Cases (Adds Only)						
Use Case Name	Use Case Number	Step Inserted After				

Actors								
Actor Name Person/System Brief Description								
Player	P	The player that's interacting with the video game.						

	Pre-Conditions Pre-Conditions					
#	Description					
01	In game					

	Start Stimulus
Player wants to crouch	

	Use Case Main Course Steps								
<u>Number</u>	Description	Adds/Alt	Bus Rule#						
		Name/Number							
01	Read keyboard input to have the player crouch								

Exception Conditions					
Exception Situations	Action(s) on Exception	Adds\Alt UC			
		<u> </u>			

Post-Conditions							
#	# Description						
01	The player has crouched						

Candidate Objects					
Class/Object	Descriptions	Possible			
<u>Name</u>		<u>attributes</u>			
Player Movement		Crouch amount, is crouched			

	Assumptions									
<u>#</u>	# Assumption Date Raised By Date Verified By									

	Issues								
# Issue Date Raised Raised By Date Verified Verified By									

Other Comments				
Author	Comment	Date		
Carl Lowther	While in game we will constantly check if the player has used the keyboard	10/11/1 8		

Fre	Frequency: Minimum: Maximum: Average: (OR)Fixed:											
Per	-		Hour:	Day: Week:							ee comments	
	-											
						Ti	ming I	nforma	tion			
#	At/		Step(s)	Timin	ıg	Minim		Averag			ım	Comments
	Betwee	<u>en</u>		Unit								
1	At		01	secono	ds					0.016		Player should be moved as
												quickly as possible
						Vo	lume l	Informa	tion			
#	Step	#	Unit of		Mini	mum	Aver	age	Ma	ximum	Co	mments
			Measure									
N\A	١.											
						Player	r Inr	nning\	HC	048		
Player Jumping\UC 048												
	General Information											
	Use Case Name\Number : Player jumping UC 048 Responsible Analyst : Carl Lowther						2.17					
					npıng	UC 048		Res	pons	ible Analy	yst : (Carl Lowther
			ayer Moven									
Des	cription	: Allo	ows the play	y to jum	ıp ın ga	ame						
						Dogwin		a/Eactur	T.	10.00		
DE	Ω#	Day	quirements	Nama	and /			s/Featur	reir	ace		
RE	<u>Q#</u>	Nec	quirements	Name	anu /	or Short	Desci	трион				
1.d												

,	,			T		I	Cevisio	n Histo				
	hor 1			Date				Comments				
Car	l Lowthe	r		10/11/18			First Draft					
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ļ				ļ								
<u> </u>												
	Insertion Points in other Use Cases (Adds Only)											
				ın oth	_		_					
Use Case Name Use			Use C	Use Case Number			Step	Inse	rted Afte	<u>r</u>		
				ļ								
							A	ctors				
	or Name	2			n/Sys	<u>tem</u>				cription		
Play	/er			P				The	playe	er that's in	terac	ting with the video game.
				ļ								

					Pre-Condi	tions		
#]	Description			
01	In gar	ne						
					Start Stim	ulus		
Playe	er wants	to jum	p					
				U	Jse Case Main C			
Num	<u>iber</u>	Desc	ription			Adds/Al		Bus Rule#
0.1		D.			1 1 .	Name/N	<u>umber</u>	
01		Keac	i keyboard	input to nave t	the player jump			
					Exception Co	nditions		
Exc	eption S	ituatio	ne	Action(s) o	n Exception	nuttons		Adds\Alt UC
LAC	cption 5	ituatio	11.5	11ction(s) of	n Exception			#
								<u> </u>
				l .				I
					Post-Cond	itions		
#	Desc	riptio	n					
01			has jumped	d				
					Candidate C	Objects		
	s/Object		Descript	<u>tions</u>			Poss	
Nam							attrib	
Playe	er Mover	nent						amount, Is on the
							groun	10
					Assumpti	ions		
#	Assum	ntion			Date	Raised	Date	Verified By
<u>"</u>	1 x33um	711011			Raised	By	Verified	vernicu by
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<u> </u>					•	•		•
					Issues	;		
<u>#</u>	Issue				Date	Raised	Date	Verified By
					Raised	By	Verified	
			1 ~		Other Com	ments		1 _
	Author Comment Date Carl Lowther While in game we will constantly check if the player has used the keyboard 10/11/1							
Carl	Lowther		While	in game we wi	III constantly chec	ck if the player l	has used the keybo	
								8
					Fraguency of I	Vacution		
Fran	uency:		Minim	niim.	Frequency of I		verage:	(OR)Fixed:

	Timing Information						
#	At/ Between	Step(s)	Timing Unit	Minimum	Average	<u>Maximum</u>	Comments
1	At	01	seconds			0.016	Player should be moved as quickly as possible

	Volume Information					
<u>#</u>	Step #	<u>Unit of</u> Measure	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>	Comments
		Measure				
N						
\						
A						

Climbing Objects\UC 049

General Information							
Use Case Name\Number : Climbing objects UC 049 Subject Area : Player Movement Description : Allows the player to climb objects	Responsible Analyst : Carl Lowther						

	Requirements/Feature Trace						
REQ#	REQ# Requirements Name and / or Short Description						
1.e	climbing ladders, ropes, and chest high objects (walls, fences, windows)						

Revision History					
Author	Comments				
Carl Lowther	10/11/18	First Draft			

Insertion Points in other Use Cases (Adds Only)					
Use Case Name	<u>Use Case Number</u>	Step Inserted After			

Actors						
Actor Name	Person/System	Brief Description				
Player	P	The player that's interacting with the video game.				

	Pre-Conditions					
#	Description					
01	In Game					
02	Next to a climbable object					

	Start Stimulus													
Play	yer right c	icking on	a climb	able objec	t									
					Use C	Case Ma	in Co							
Nu	mber	Descript	<u>ion</u>						Adds/Alt Bus R			ule#		
									Name/Number					
01		Climb La	limb Ladders and ropes					(049.1					
02		Climbing	mbing over objects					()49.2					
03		Jump off	of obje	cts				()49.3					
		-												
	Exception Conditions													
Ex	Exception Situations Action(s) on Exception Adds\Alt UC							Adds\Alt UC						
													<u>#</u>	
						Post-C	Conditi	ions						
#	Desc	ription												
01	The	player is no	ow in a	new locat	ion									
						Candida	ate Ob	jects						
Cla	ss/Object	Do	escripti	ons							Possi			
Naı											attrib			
Play	yer Moven	nent									Is clin	nbing		
						Assu	mptio	ns						
<u>#</u>	Assum	<u>otion</u>						Rais	<u>sed</u>	Date	_	Ve	erified By	
						Raise	ised By			Veri	fied			
							ssues							
<u>#</u>	<u>Issue</u>								Raised		<u>Date</u> Verified		Verified By	
						Raise	sed By		<u>V</u> 6		fied			
							-							
						Other (Comm	ents					Т _	
	<u>hor</u>		Comme		***			10.1					Date	
Car	l Lowther		While ii	n game we	will co	nstantly	check	if the	player has us	ed the	keybo	oard	10/11/18	
							0.15							
-			3.61.1		Fre	equency						(OD) E	. 1	
	quency:		Minim		***		imum:		Average			(OR)F	ixed:	
Per	:	Hour:	Ш	Day:	We	ek:	M	onth:	Other:	See c	omme	ents		
	Timing Information													
,,	A 4 /	10.	<u> </u>							-				
<u>#</u>	At/	Step(iming	Minir	<u>num</u>	Aver	age	Maximum	1 <u>C</u>	omme	ents		
1	Between			nit	 				0.017	D1	orra= -1	h o u 1 1 1	marrad	
1	At	1,2,3	Se	econds					0.016				e moved as	
					+					qu	пскіў	as poss	sible	
		_			+									
					 					-				
			1		1		<u> </u>							

#	Step #	Unit of	Minimum	Average	Maximum	Comments		
		Measure						
N∖A								
			Alternate (Course Genera	Information			
A lte	ernate Course	Name\Number:						
	Description: Allows the player to Climb Ladders and ropes							
	Reason for Execution: Non Exception: Exception:							
Ct	. I 1 A C			Insertion Poin	ıt			
O1	Inserted Aft	ter						
01								
				Pre-Condition	ıs			
1.	Player is rig	ght clicking on a l	adder or rope					
2.	•	•	•					
			Alto	ernate Course	Steps			
#	Step Descr	iption			Adds Use C	ase # Business Rule(s)#		
								
1.	Read keybo	ard input to move	up or down					
2.	Move the p	layer						
3.								
4.								
1	Diana			Post-Condition	ns			
1. 2.	Player has 1	noved						
۷.								
			Alternate C	Course Genera	l Information			
Alte	rnate Course	Name\Number:						
		ows the player to			_			
Rea	son for Exec	ution:	Non Excepti	on: 🖂 🛚 Exe	ception:			
				Insertion Poin	-4			
Ster	Inserted Aft	er		Insertion Pon	11			
01	mscred An	iCI						
01								
	Pre-Conditions							
1.								
2.								
			474		G.			
			Alto	ernate Course	Steps			
#	Step Descr	iption_			Adds Use C	ase # Business Rule(s)#		
1.	Move the p	layer						
2.		-			1			
3.					1			
4.								

Post-Conditions								
1. Player has moved								
2.								
A 1: ~	Alternate Course General Information							
Alternate Co	ourse Name\Num	aber: Jump off of objects UC 04 er to jump off of an object that	19.3 the player is elimbine					
Reason for l		Non Exception:	Exception:					
reason for i	SACCULION.	Tron Exception.	Елеерион.					
		Insertio	n Point					
Step Inserte	d After							
01								
		Pre-Con	ditions					
1. Player	is climbing an ol		luttions					
2.	is commoning an or	5,1001						
		Alternate Co	ourse Steps					
# Step D	escription		Adds Use Case #	Business Rule(s)#				
	-							
1. Read k	eyboard input to	jump off the object						
2. Move t	the player							
3.								
4.	4.							
Post-Condit	ioma							
	has moved							
2.	nas movea							
		Player Inven	atory\UC 050					
		General In	formation					
H. C. M	\3.1 1 D1			1 r d				
	ame\Number : Pl a : Player Interac	ayer inventory UC 050	Responsible Analyst : Ca	rl Lowther				
		k through Inventory						
DEO#	D	Requirements/						
REQ#		Name and / or Short Descrip	<u>otion</u>					
2.a	Player inventor	ry						
Author Date Comments								
Carl Lowther		10/11/18	First Draft					
		20,720,720						
Han Com N		Insertion Points in other						
Use Case N	<u>ame</u>	Use Case Number	Step Inserted After					
		1	I .					

Actors						
Actor Name	Person/System	Brief Description				
Player	P	The player that's interacting with the video game.				

	Pre-Conditions						
#	Description						
01	In game						

Start Stimulus
Player accesses there inventory

	Use Case Main Course Steps								
Number	<u>Description</u>	Adds/Alt Name/Number	Bus Rule#						
01	Reads input to look through inventory	1(4110/1/4111001							
02	Reads input to toggle inventory								

Exception Conditions							
Exception Situations	Action(s) on Exception	Adds\Alt UC					
		#					

Post-Conditions						
#	Description					
01	The inventory will be closed					

Candidate Objects						
Class/Object Name	<u>Descriptions</u>	Possible attributes				
Inventory		List of objects, current position in inventory, is open				
		•				

	Assumptions								
<u>#</u>	<u>Assumption</u>	Date Raised	Raised By	<u>Date</u> Verified	Verified By				

	Issues								
#	<u>Issue</u>	Date Raised	Raised By	Date Verified	Verified By				

Other Comments								
<u>Author</u>	Comment	Date						
Carl Lowther	While in game we will constantly check for player input from the keyboard	10/11/1 8						

	Frequency of Execution									
Fre	Frequency: Minimum: Maxin									
Per		Hour:	Day: Week:		Mon	Month: Other: See comr				
			•							
						nforma	tion			
<u>#</u>	At/ Between	Step(s)	Timing Unit	Minim	<u>um</u>	Averag	Average Maximu		<u>um</u>	Comments
1	At	1,2	Seconds					0.03		Inventory should be quick to load and look though
					lume	Informa				
<u>#</u>	Step#	<u>Unit of</u> <u>Measure</u>	Min	<u>imum</u>	Avei	age :	Ma	<u>ximum</u>	Co	<u>mments</u>
1	1,2	kb			2				Per	object
	Opening Doors\UC 052									
				Ge	eneral	Informa	tion			
Use	Case Nar	ne\Number : C	pening doors	UC 052		Res	spons	ible Analy	yst : (Carl Lowther
		: Player interac								
Des	cription:	Allows player	to open doors							
				Requir	rement	ts/Featur	re Tr	ace		
RE	Q#	Requirements	Name and /							
2.b		Opening doors								
2.0		opening doors								
				1	Dovisi	on Histo	MX7			
Ant	thor		Date		ZC V 1510	Con		ts		
_	l Lowther		10/11/18			First Draft				
			10/11/10				The Dian			
			T .	ъ.	•	•	7	(4.12.5		
T T	C N				in oth			(Adds O		
<u>Use Case Name</u> <u>Use</u>			Use Case N	Number		Step	Inse	rted Afte	r	
L			<u> </u>							
					A	ctors				
Act	or Name		Person/Sys	stem			f Des	cription		
Play			P						terac	ting with the video game.
	,						, -			
	L									

Pre-Conditions														
#					Desc	ription								
01	In gan	ne												
						Start	Stimu	lus						
Wit	h in arms	reach	of a door											
					Use C	Case Ma	in Co							
Nu	<u>mber</u>	Desc	<u>cription</u>					<u>A</u>	dds/Alt			Bus	Rule#	
								N	ame/Numbe	r				
01	01 Read input from player to open or close door													
						xception		ditions	S				1	
Ex	ception Si	ituatio	ons	Action(s)) on Ex	ception	1							s\Alt UC
													#	
						D / C	1 1.4	•						
ш	D					Post-C	ondit	ions						
#		riptio												
01	Togg	gie doc	or position											
						C 1: 1	-4- 01							
Cla	ss/Object		Dogovin	tions		Candid	ate Or	ojecis			Poss	iblo		
Nai			Descrip	tions								<u>sible</u> butes		
Ivai	<u>iic</u>										attii	Dutes	!	
						Accu	mptio	ne						
#	Assum	ntion				Date		Raise	ed	Da	te	٠	Verifie	d Rv
<u>"</u>	71334111	<i>,</i> , , , , , , , , , , , , , , , , , ,				Raised By			<u>cu</u>	Verified			v CI IIIC	u Dy
						Ittiise	<u>u</u>	<u> </u>			meu			
	I					ı								
						Is	ssues							
#	Issue					Date Raised Date				Verifie	d By			
_						Raise	d	By			rified	-		<u></u>
•								•						
						Other (Comm	ents						
Au	thor		Comn	nent										Date
Car	l Lowther		While	in game we	will co	nstantly	check	for pla	ayer input					10/11/18
					Fre	equency	of Ex	ecutio	n					
Fre	quency:		Minir	num:		Max	imum		Average)Fixed:	
Per	Per: Hour: Day: Week: Month: Other: See comments													
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#														
	Between	_		<u>Unit</u>										
1	At	(01	seconds					0.016					noving as
										C	luickly	as po	ssible	
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									<u> </u>					

	Volume Information									
#	Step #	Unit of Measure	Minimum	<u>Average</u>	<u>Maximum</u>	Comments				
N∖A										

Picking Locks\UC 054

General Information						
Use Case Name\Number : Picking Locks UC 054 Subject Area : Player Interaction Description : Allows player to pick locks	Responsible Analyst : Carl Lowther					

Requirements/Feature Trace							
REQ# Requirements Name and / or Short Description							
2.c.i	Picking locks						

Revision History						
Author Date Comments						
Carl Lowther 10/11/18		First Draft				

Insertion Points in other Use Cases (Adds Only)							
Use Case Name Use Case Number Step Inserted After							

Actors						
Actor Name Person/System Brief Description						
Player	P	The player that's interacting with the video game.				

Pre-Conditions					
#	Description				
01	In game				
02	In reach of a lock				

Start Stimulus			
Player right clicks on the lock			

	Use Case Main Course Steps							
Number	Description	Adds/Alt	Bus Rule#					
		Name/Number						
01	Read keyboard input from player to pick the lock							
	(See 2.c.i)							

	Exception Conditions												
Exce	Exception Situations Action(s) on Excep					eption					Ac	lds\Alt UC	
												<u>#</u>	
	Post-Conditions Post-Conditions												
<u>#</u>	Descript	tion_											
01	Lock is p	oicked											
	1												
		<u> </u>			(Candida	ate Obj	ects					
	Object	Descrip	tions								Possibl		
Name											attribut	tes	
						Accu	mption	8					
#	Assumption	n				Date		Raise	·d	Da	nte	Verif	ied By
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							ssues						
# I	ssue								Verif	ied By			
						Raise	d	<u>By</u>		Ve	erified		
						Othor (Comme	n ta					
Autho	r	Comi	nont			Other (Comme	nts					Date
_	owther			ne we	will cor	stantly	check t	or nls	ayer input				10/11/18
Curr	ow their	***************************************	m gai	iic we	WIII COI	istairtiy	check i	or pic	iyer input				10/11/10
		ı											I.
					Fre	quency	of Exe	cutio	n				
Frequ	ency:	Mini	mum:				imum:		Avera	ige:	(C	R)Fixe	d:
Per:		Hour:	Day	/: <u> </u>	Wee	k: 🗌	Mo	nth:	Oth	er: See	Comment	ts	
"	A 4 /	[G(()	me.				Informa				<u> </u>		
<u>#</u>	At/	Step(s)	Timi		Minin	<u>ıum</u>	Avera	ge	Maximu	<u>ım</u>	Comment	<u>s</u>	
N∖A	Between		Unit										
1 V \/ A													
	1	1	1		<u> </u>		I.			I			
						olume l	Informa	tion					
<u>#</u>	Step #	Unit of		Mini	mum	Avei	rage	Ma	ximum	Com	ments		
		Measure											
N∖A													
						1				<u> </u>			

Pick Safes\UC 056

General Information				
Use Case Name\Number : Pick safes UC 056 Subject Area : Player Interaction Description : Allows player to pick safe	Responsible Analyst : Carl Lowther			

	Requirements/Feature Trace					
REQ#	Requirements Name and / or Short Description					
2.c.ii	Pick safes					

Revision History								
Author Date Comments								
Carl Lowther	10/11/18	First Draft						

Insertion Points in other Use Cases (Adds Only)					
Use Case Name	Use Case Number	Step Inserted After			

Actors					
Actor Name	Person/System	Brief Description			
Player	P	The player that's interacting with the video game.			

	Pre-Conditions				
#	Description				
01	In game				
02	In reach of a safe				

Start Stimulus
Player right clicks on the safe

	Use Case Main Course Steps						
Number	Description	Adds/Alt	Bus Rule#				
		Name/Number					
01	Read keyboard input from player to pick the lock (See 2.c.ii)						

Exception Conditions					
Exception Situations	Action(s) on Exception	Adds\Alt UC #			

	Post-Conditions				
#	Description				
01	Safe is picked				

	Candidate Objects											
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	General Information											
	Case Name\1			s UC 05	8	Res	spons	ible Anal	yst : (Carl Lowth	er	
	ject Area : Pl											
Des	cription : Stea	aling objects	in the level	or off of	enemie	S						

	Requirements/Feature Trace				
REQ#	Requirements Name and / or Short Description				
2.d	stealing gold, keys, important items, valuable objects (e.g. jewels, rings, necklaces, vases, small statues) in the level and off of enemies				

	Revision History				
Author	Date	Comments			
Carl Lowther	10/11/18	First Draft			

Insertion Points in other Use Cases (Adds Only)					
Use Case Name	Use Case Number	Step Inserted After			

Actors				
Actor Name	Person/System	Brief Description		
Player	P	The player that's interacting with the video game.		

Pre-Conditions					
#	Description				
01	In game				
02	Within arms reach of steal able objects				

	Start Stimulus	
The player right clicks on the object		

	Use Case Main Course Steps							
Number Description Adds/Alt Bus Re								
		Name/Number						
01	Add the object to the players Inventory							

Exception Conditions						
Exception Situations	Action(s) on Exception	Adds\Alt UC #				

Post-Conditions					
#	Description				
01	Object is in the players inventory				
02	The object is no longer in the level or on an enemy				

Candidate Objects						
Class/Object Name	Descriptions	Possible attributes				

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	Revision						
Author	<u>Date</u>	Comments					
Carl Lowther	10/11/18	First Draft					
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	Actors						
Actor Name	Person/System	Brief Description					
Player	P	The player that's interacting with the video game.					
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	Pre-Conditions				
#	Description				
01	In game				
02	In arms reach to an enemy				
03	The enemy is not in an alerted state				

Start Stimulus
Player left click on enemy

	Use Case Main Course Steps						
Number	Description	Adds/Alt	Bus Rule#				
		Name/Number					
01	Knock an enemy out						

Exception Conditions						
Exception Situations	Action(s) on Exception	Adds\Alt UC #				

	Post-Conditions						
#	Description						
01	Enemy is knock out						

Candidate Objects						
Class/Object Name	<u>Descriptions</u>	Possible attributes				

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	Volume Information							
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Using Switches\UC 064

General Information						
Use Case Name\Number: Using switches UC 064 Subject Area: Player Interaction Description: Allows the user to use switches to toggle objects in the level	Responsible Analyst : Carl Lowther					

	Requirements/Feature Trace						
REQ#	REQ# Requirements Name and / or Short Description						
2.g	Use switches						

Revision History					
Author Date Comments					
Carl Lowther	10/11/18	First Draft			

Insertion Points in other Use Cases (Adds Only)						
Use Case Name	Use Case Number	Step Inserted After				

Actors					
Actor Name	Person/System	Brief Description			
Player	P	The player that's interacting with the video game.			

	Pre-Conditions							
#	Description							
01	In game							
02	In reach of switch							

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Enemy AI\UC 065

General Information							
Use Case Name\Number: Enemy AI UC 065 Subject Area: Enemy AI Description: Algorithms for how the enemies should behave	Responsible Analyst : Carl Lowther						

Requirements/Feature Trace						
REQ# Requirements Name and / or Short Description						
3.	Enemy Movement, Navigation, and Interaction					
4.	Shadow Detection					
5.	Sound Detection					
6.	Enemy Detection					

Revision History								
Author	Date	Comments						
Carl Lowther	10/11/18	First Draft						

Insertion Points in other Use Cases (Adds Only)								
Use Case Name	Use Case Number	Step Inserted After						

Actors								
Actor Name	Person/System	Brief Description						
Player	P	The player that's interacting with the video game.						

	Pre-Conditions							
#	Description							
01	In game							
02	While game is not paused							

Ī	Start Stimulus
Ī	The beginning of the level

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Level\UC 080

General Information					
Use Case Name\Number: Level UC 080 Subject Area: Levels Description: The information need for a level	Responsible Analyst : Carl Lowther				

Requirements/Feature Trace							
REQ#	REQ# Requirements Name and / or Short Description						
7	The information need for a level						

Revision History								
Author Date Comments								
Carl Lowther	10/11/18	First Draft						

Insertion Points in other Use Cases (Adds Only)						
Use Case Name	Use Case Number	Step Inserted After				

Actors								
Actor Name	Actor Name Person/System Brief Description							
Player	P	The player that's interacting with the video game.						

	Pre-Conditions					
#	Description					
01	In game					

Start Stimulus
Loading level

Use Case Main Course Steps									
Number Description Adds/Alt Bus Rule#									
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Database\UC 085

General Information					
Use Case Name\Number: Database UC 085 Subject Area: Server Description: Hosting and accessing database	Responsible Analyst : Carl Lowther				

	Requirements/Feature Trace				
REQ#	Requirements Name and / or Short Description				
9.b	Hosting and accessing database				

Revision History									
Author	Author Date Comments								
Carl Lowther	10/11/18	First Draft							

Insertion Points in other Use Cases (Adds Only)						
Use Case Name Use Case Number Step Inserted After						

Actors					
Actor Name Person/System Brief Description					
Player	P	The player that's interacting with the video game.			

	Pre-Conditions		
#	Description		
01	At after level screen		

	Start Stimulus
Loading scoreboard info	

	Use Case Main Course Steps						
Number	Number Description Adds/Alt Bus Rule#						
		Name/Number					
01	Connecting to the data to send and receive data						
02	Close connection when done						

	Exception Conditions				
Exception Situations	Action(s) on Exception	Adds\Alt UC #			

	Post-Conditions		
#	Description		
01	1 Database connection is closed		

	Candidate Objects											
Cla	Class/Object Descriptions Possible											
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										connection	to the da	aouse
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#	Step #	Unit of		Minimum	Ave			ximum	Com	ments		
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1	1	KB					To receive data					
						· · · · · · · · · · · · · · · · · · ·						
				Alternate (Course	Genera	ıl Info	rmation				
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	cription:											
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1					Pre-C	onditio	ns					
1.												
2.												

	Alternate Course Steps					
#	Step Description	Adds Use Case #	Business Rule(s)#			
1.						
2.						
3.						
4.						

	Post-Conditions
1.	
2.	

Hosting the Game\UC 090

General Information				
Use Case Name\Number: Hosting the game UC 090 Subject Area: Servers Description: Allows access to the game off of the cloud	Responsible Analyst : Carl Lowther			

	Requirements/Feature Trace				
REQ#	REQ# Requirements Name and / or Short Description				
9.c	O.c Hosting the game on a server				

Revision History						
Author Date Comments						
Carl Lowther	10/11/18	First Draft				

Insertion Points in other Use Cases (Adds Only)							
Use Case Name	Use Case Number	Step Inserted After					

Actors							
Actor Name	Person/System	Brief Description					
Player	P	The player that's interacting with the video game.					

Pre-Conditions						
#	# Description					
N∖A	The server always exists in this situation					

Start Stimulus
Player Start to load the game

						Use Ca	ase Ma	in Cou	rse St	eps					
Nui	mber_	<u>Description</u>								Adds/Alt Name/Number			Bus Rule#		
01		Connects to the sever to download				wnload	I the game			<u>rvame/rvamber</u>					
						Ex	ceptio	n Condi	tions						
Ex	ception Si	tuatio	<u>ons</u>	A	ction(s	on Exc								Adds	Alt UC #
							Post-C	Conditio	ns						
#		riptio					1 050 0	01141110							
N\A	The s	server	always e	exists in	this si	tuation									
						C	Candid	ate Obj	ects						
Cla Nai	ss/Object		Descri	ptions								Poss attri			
Ivai	<u>ne</u>											attri	Dut	es	
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<u> </u>	Assump	, tion					Raise					erified		vermed by	
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	Alternate Course G	eneral Information					
Alternate Course Name\Number:							
Description:	_	_					
Reason for Execution:	Non Exception:	Exception:					
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Step Inserted After							
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	Alternate C	ourse Steps					
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m Sup Description		Auds Ose Case	Dusiness Rule(s)				
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	Post-Cor	nditions					
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CRUD Matrix							
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Use Case ID	Use Case	e Name	Class Name				
		P 1 (W 2E= 5					

Low Fidelity UI



Image 1. Main Menu

Resume game
Settings
Quit level
Quit Game

Image 2. In-Game Menu

Glossary

This shall be added as the development will continue, and shall by updated in response to requests and needs of the intended audience of this document.

Appendices