Report - PHASE 3

Group 21's approach to the testing phase was to first test the key elements of the game. Thus, we checked multiple times if the game was running smoothly by checking whether:

- The game *started* with the player on the start tile when the button was clicked
- The player *moved* appropriately according to the movements (arrow keys)
- The *time and score* displays worked correctly
- The *time started* as the player started moving
- The *score increased* when the player came in contact with the reward or bonus reward
- The *score decreased* if the player collided with the punishment
- The player *lost* when running into the enemy
- The game was *paused* with the time, enemies, and player pausing when p was pressed
- The game was *resumed* with the same situation it was paused in when r was pressed
- The game data was *saved* (written into a file) when s was pressed
- The game was *quitted* correctly when the button was clicked
- The player *won* when reaching the end tile (with all rewards collected)

After testing such we started the test code:

- We tested each segment of the classes
- We checked if the values were correct
- If the values assigned to the single, multivalued, derived, or composite variables were correct for the game to run smoothly
- We created instances of the classes to test each methods and their variable values
- First determine the variables to check, make a table, then determine the order in which the classes are tested, and then use Assert in that order and print the results
- For the **Tools class**, Tools is a simple wrapper for Assert and printf, main is the code that calls the automated test, and the other classes are the code for the corresponding parts of the test
- For the **StartScreenTest**, branch coverage includes start and exit (100%), and Line coverage includes paintComponent and check status judgment (100%)
- Branch coverage of **PauseAndResumeTest** includes Pause and Resume (100%) , line coverage includes PauseAndResume, update, getStateImage and Draw (75%), Draw has no way of automating judgment
- **MouseHandlerTest'**s branch coverage includes mousePressed (100%), and line coverage because it is overloaded(100%)
- **AssetsetterTest**'s branch coverage has only one Asset setup (100%) and Line coverage contains setObject and setEnemy (100%)
- The GamePanel class interacted with each of the other classes such KeyHandler or MouseHandler and thus it was instantiated to test each of the classes
- Cases were created for the **CollisionCheckerTest** class to place the tile (wall and walk), punishment, reward, and enemy on arbitrary positions on the maze and check their collision (true or false) with the player by calling the appropriate functions (Line Coverage: 27%, , Branch Coverage: the if-else statements are for player movements but

collision is checked with arbitrary but fixed values - though, one of the tile, object, and entity type are accounted for in the testing)

- For the **KeyHandlerTest** class, each key input was simulated (up, down, right, left, p, r, s) and their subsequent change in values handled by the KeyHandler class was then checked (true when pressed and false when released), as this would lead the other interacting classes' methods like Player class or UI class to move the player image or pause the game, etc. (Line Coverage: 75%, Branch Coverage: 100 %)
- For the **TileManagerTest** class, the two arrays of the tiles were checked for the correct values and sizes so that correct tiles (wall or walk) were read (as 0 or 1) from the map text file and correctly put on the maze map. (Line Coverage: 27%, Branch Coverage: not many branches to be tested - the if statements are to set values)
- The **GamePanelTest** class was created to test the initial set-up variables of the game and check if the foundational attributes of the game were correct (Line Coverage: 25%, Branch Coverage: is to set values and update)
- For testing purposes, the **Main** class instantiated the GamePanel and called the tests of the various test classes (Line Coverage: 100%, Branch Coverage: no branches)
- For Entity class, the general attribute for entities in the game (Enemy, and Player) is initialized, thus all the initialized attributes are tested. (Line Coverage: 100%, Branch Coverage: NA)
- For Player class, since it is a subclass of Entity it implements attributes of Entity and sets values of each attribute suitable to Player's characteristics. Tested if attributes are set to the right Player's characteristics, such as starting position, direction change, and image change depending on direction, etc. (Line Coverage: 51%, Branch Coverage: 25%)
- For Enemy class, it is also a subclass of Entity, which implements attributes of Entity and sets values of each attribute suitable to Enemy's characteristics. Tested if attributes are set to Enemy's characteristics similar to PlayerTest. (Line Coverage: 54%, Branch Coverage: 25%)
- For UI class, which deals with what the user is visualizing, UI determines when to terminate the thread of the game. When the UI class notifies the game is finished (gameLost or gameWon) it sets gameThread to null with some message to the user. Tested if the UI class displays the right message and terminates the thread depending on the situation. (Line Coverage: 25%, Branch Coverage: 50%)
- For the object classes, the main test is whether the subclass can correctly modify the variables in the parent class so that the game scene layout is displayed correctly.(Line coverage for Superobject classe: 66%, Branch coverage: NA, Line coverage for rest Object classes:100%and Branch coverage: 100%)
- For the save class, test whether clicking the save button works and is written to the saved document.(Line Coverage: 75%, Branch Coverage: 50%)

Printing result for the testing:

Main Class	Sub Class	Var Name	Sub Name	In_Var	Expect Data	Real Data
StartScreenTest	StartScreen	start	playButton	x	200.0000	200.0000
StartScreenTest	StartScreen	start	playButton	y	280.0000	280.0000
StartScreenTest	StartScreen	start	playButton	width	100.0000	100.0000
StartScreenTest	StartScreen	start	playButton	height	50.0000	50.0000
StartScreenTest	StartScreen	start	stopButton	x	400.0000	400.0000
StartScreenTest	StartScreen	start	stopButton	y	280.0000	280.0000
StartScreenTest	StartScreen	start	stopButton	width	100.0000	100.0000
StartScreenTest	StartScreen	start	stopButton	height	50.0000	50.0000

Main Class	Sub Class	Var Name	Sub Name	In_Var	Expect Data	Real Data
AssetSetterTest	OBJ_HTMLTag	obj0	world	X	144.0000	144.0000
AssetSetterTest	OBJ_HTMLTag	obj0	world	Y	912.0000	912.0000
AssetSetterTest	OBJ_HTMLTag	obj1	world	X	336.0000	336.0000
AssetSetterTest	OBJ_HTMLTag	obj1	world	Y	1680.0000	1680.0000
AssetSetterTest	OBJ_HTMLTag	obj2	world	X	720.0000	720.0000
AssetSetterTest	OBJ_HTMLTag	obj2	world	Y	1056.0000	1056.0000
AssetSetterTest	OBJ_HTMLTag	obj3	world	X	1152.0000	1152.0000
AssetSetterTest	OBJ_HTMLTag	obj3	world	Y	240.0000	240.0000
AssetSetterTest	OBJ_HTMLTag	obj4	world	X	1008.0000	1008.0000
AssetSetterTest	OBJ_HTMLTag	obj4	world	Y	2208.0000	2208.0000
AssetSetterTest	OBJ_HTMLTag	obj5	world	X	144.0000	144.0000
AssetSetterTest	OBJ_HTMLTag	obj5	world	Y	1200.0000	1200.0000
AssetSetterTest	OBJ_HTMLTag	obj6	world	X	2256.0000	2256.0000
AssetSetterTest	OBJ_HTMLTag	obj6	world	Y	1392.0000	1392.0000
AssetSetterTest	OBJ_HTMLTag	obj7	world	X	1536.0000	1536.0000
AssetSetterTest	OBJ_HTMLTag	obj7	world	Y	1872.0000	1872.0000
AssetSetterTest	OBJ_HTMLTag	obj8	world	X	240.0000	240.0000
AssetSetterTest	OBJ_HTMLTag	obj8	world	Y	1344.0000	1344.0000
AssetSetterTest	OBJ_HTMLTag	obj9	world	X	816.0000	816.0000
AssetSetterTest	OBJ_HTMLTag	obj9	world	Y	672.0000	672.0000
AssetSetterTest	OBJ_HTMLTag	obj10	world	X	1968.0000	1968.0000
AssetSetterTest	OBJ_HTMLTag	obj10	world	Y	2160.0000	2160.0000
AssetSetterTest	OBJ_HTMLTag	obj11	world	X	1632.0000	1632.0000
AssetSetterTest	OBJ_HTMLTag	obj11	world	Y	1440.0000	1440.0000
AssetSetterTest	OBJ_HTMLTag	obj12	world	X	816.0000	816.0000
AssetSetterTest	OBJ_HTMLTag	obj12	world	Y	1680.0000	1680.0000
AssetSetterTest	OBJ_HTMLTag	obj13	world	X	1920.0000	1920.0000
AssetSetterTest	OBJ_HTMLTag	obj13	world	Y	1104.0000	1104.0000
AssetSetterTest	OBJ_HTMLTag	obj14	world	X	2304.0000	2304.0000
AssetSetterTest	OBJ_HTMLTag	obj14	world	Y	2304.0000	2304.0000
AssetSetterTest	enemies	Enemy0	world	X	144.0000	144.0000
AssetSetterTest	enemies	Enemy0	world	Y	2160.0000	2160.0000
AssetSetterTest	enemies	Enemy1	world	X	1392.0000	1392.0000
AssetSetterTest	enemies	Enemy1	world	Y	1296.0000	1296.0000
AssetSetterTest	enemies	Enemy2	world	X	2016.0000	2016.0000
AssetSetterTest	enemies	Enemy2	world	Y	240.0000	240.0000
AssetSetterTest	enemies	Enemy3	world	X	576.0000	576.0000
AssetSetterTest	enemies	Enemy3	world	Y	864.0000	864.0000
AssetSetterTest	enemies	Enemy4	world	X	1872.0000	1872.0000
AssetSetterTest	enemies	Enemy4	world	Y	1440.0000	1440.0000

Main Class	Sub Class	Var Name	Sub Name	In_Var	Expect Data	Real Data
MouseHandlerTest	MouseEvent	Start_Game	mousePressed	X	271	271
MouseHandlerTest	MouseEvent	Start_Game	mousePressed	Y	291	291
MouseHandlerTest	MouseEvent	Start_Game	State	GAME	GAME	GAME

Main Class	Sub Class	Var Name	Sub Name	In_Var	Expect Data	Real Data
GamePanel	MouseEvent	Pause_Game	KeyPressed	getKeyCode()	80	80
GamePanel	MouseEvent	Pause_Game	pausePressed	keyH	true	true
GamePanel	MouseEvent	Pause_Game	KeyPressed	getKeyCode()	82	82
GamePanel	MouseEvent	Pause_Game	resumePressed	keyH	true	true
GamePanel	MouseEvent	Pause_Game	KeyPressed	getKeyCode()	80	80
GamePanel	MouseEvent	Pause_Game	pausePressed	keyH	true	true

Main Class	Sub Class	Var Name	Sub Name	In_Var	Expect Data	Real Data
MouseHandlerTest	MouseEvent	Exit_Game	mousePressed	X	454	454
MouseHandlerTest	MouseEvent	Exit_Game	mousePressed	Y	307	307
MouseHandlerTest	MouseEvent	Exit_Game	gameThread	getState	TIMED_WAITING	TIMED_WAITING

SuperObjectTest	VariablesTest	SuperObject	Variables	points	0.0000	0.0000
SuperObjectTest	VariablesTest	SuperObject	Variables	worldx	0.0000	0.0000
SuperObjectTest	VariablesTest	SuperObject	Variables	olidAreaDefaultX	0.0000	0.0000
SuperObjectTest	VariablesTest	SuperObject	Variables	worldY	0.0000	0.0000
SuperObjectTest	VariablesTest	SuperObject	Variables	solidAreaDefaulty	0.0000	0.0000
SuperObjectTest	VariablesTest	SuperObject	Variables	solidArea	java.awt.Rectangle[x=0,y=0,width=48,height=48]	java.awt.Rectangle[x=0,y=0,width=48,height=48]
SuperObjectTest	VariablesTest	SuperObject	Variables	image	null	null
SuperObjectTest	VariablesTest	SuperObject	Variables	name	null	null
SuperObjectTest	VariablesTest	SuperObject	Variables	collision	false	false
SemicolonTest	VariablesTest	Semicolon	Variables	points	20.0000	20.0000
SemicolonTest	VariablesTest	Semicolon	Variables	worldx	0.0000	0.0000
SemicolonTest	VariablesTest	Semicolon	Variables	olidAreaDefaultX	0.0000	0.0000
SemicolonTest	VariablesTest	Semicolon	Variables	worldY	0.0000	0.0000
SemicolonTest	VariablesTest	Semicolon	Variables	solidAreaDefaulty	0.0000	0.0000

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| SemicolonTest | VariablesTest | Semicolon | Variables | solidArea | java.awt.Rectangle[x=0,y=0,width=48,height=48] | java.awt.Rectangle[x=0,y=0,width=48,height=48] |
| SemicolonTest | VariablesTest | Semicolon | Variables | image | sun.awt.image.ToolkitImage@5ce81285 | sun.awt.image.ToolkitImage@5ce81285 |
| SemicolonTest | VariablesTest | Semicolon | Variables | points | Semicolon | Semicolon |
| SemicolonTest | VariablesTest | Semicolon | Variables | collision | true | true |
| LaptopTest | VariablesTest | Laptop | Variables | points | 50.0000 | 50.0000 |
| LaptopTest | VariablesTest | Laptop | Variables | worldx | 0.0000 | 0.0000 |
| LaptopTest | VariablesTest | Laptop | Variables | olidAreaDefaultX | 0.0000 | 0.0000 |
| LaptopTest | VariablesTest | Laptop | Variables | worldY | 0.0000 | 0.0000 |
| LaptopTest | VariablesTest | Laptop | Variables | solidAreaDefaulty | 0.0000 | 0.0000 |
| LaptopTest | VariablesTest | Laptop | Variables | solidArea | java.awt.Rectangle[x=0,y=0,width=48,height=48] | java.awt.Rectangle[x=0,y=0,width=48,height=48] |
| LaptopTest | VariablesTest | Laptop | Variables | image | sun.awt.image.ToolkitImage@5ec0a365 | sun.awt.image.ToolkitImage@5ec0a365 |
| LaptopTest | VariablesTest | Laptop | Variables | name | Laptop | Laptop |
| LaptopTest | VariablesTest | Laptop | Variables | collision | true | true |
| InternetTrapTest | VariablesTest | InternetTrap | Variables | points | -20.0000 | -20.0000 |
| InternetTrapTest | VariablesTest | InternetTrap | Variables | worldx | 0.0000 | 0.0000 |
| InternetTrapTest | VariablesTest | InternetTrap | Variables | olidAreaDefaultX | 0.0000 | 0.0000 |
| InternetTrapTest | VariablesTest | InternetTrap | Variables | worldY | 0.0000 | 0.0000 |
| InternetTrapTest | VariablesTest | InternetTrap | Variables | solidAreaDefaulty | 0.0000 | 0.0000 |
| InternetTrapTest | VariablesTest | InternetTrap | Variables | solidArea | java.awt.Rectangle[x=0,y=0,width=48,height=48] | java.awt.Rectangle[x=0,y=0,width=48,height=48] |
| InternetTrapTest | VariablesTest | InternetTrap | Variables | image | sun.awt.image.ToolkitImage@5383967b | sun.awt.image.ToolkitImage@5383967b |
| InternetTrapTest | VariablesTest | InternetTrap | Variables | name | InternetTrap | InternetTrap |
| InternetTrapTest | VariablesTest | InternetTrap | Variables | collision | true | true |
| HTMLTagTest | VariablesTest | HTMLTag | Variables | points | 20.0000 | 20.0000 |
| HTMLTagTest | VariablesTest | HTMLTag | Variables | worldx | 0.0000 | 0.0000 |
| HTMLTagTest | VariablesTest | HTMLTag | Variables | olidAreaDefaultX | 0.0000 | 0.0000 |
| HTMLTagTest | VariablesTest | HTMLTag | Variables | worldY | 0.0000 | 0.0000 |
| HTMLTagTest | VariablesTest | HTMLTag | Variables | solidAreaDefaulty | 0.0000 | 0.0000 |
| HTMLTagTest | VariablesTest | HTMLTag | Variables | solidArea | java.awt.Rectangle[x=0,y=0,width=48,height=48] | java.awt.Rectangle[x=0,y=0,width=48,height=48] |
| HTMLTagTest | VariablesTest | HTMLTag | Variables | image | sun.awt.image.ToolkitImage@71423665 | sun.awt.image.ToolkitImage@71423665 |
| HTMLTagTest | VariablesTest | HTMLTag | Variables | name | HTMLTag | HTMLTag |
| HTMLTagTest | VariablesTest | HTMLTag | Variables | collision | true | true |
| EndTest | VariablesTest | End | Variables | points | 0.0000 | 0.0000 |
| EndTest | VariablesTest | End | Variables | worldx | 0.0000 | 0.0000 |
| EndTest | VariablesTest | End | Variables | olidAreaDefaultX | 0.0000 | 0.0000 |
| EndTest | VariablesTest | End | Variables | worldY | 0.0000 | 0.0000 |
| EndTest | VariablesTest | End | Variables | solidAreaDefaulty | 0.0000 | 0.0000 |
| EndTest | VariablesTest | End | Variables | solidArea | java.awt.Rectangle[x=0,y=0,width=48,height=48] | java.awt.Rectangle[x=0,y=0,width=48,height=48] |
| EndTest | VariablesTest | End | Variables | image | sun.awt.image.ToolkitImage@6fc6f14e | sun.awt.image.ToolkitImage@6fc6f14e |
| EndTest | VariablesTest | End | Variables | name | End Tile | End Tile |
| EndTest | VariablesTest | End | Variables | collision | true | true |
| CurlyBracketsTest | VariablesTest | CurlyBrackets | Variables | points | 20.0000 | 20.0000 |
| CurlyBracketsTest | VariablesTest | CurlyBrackets | Variables | worldx | 0.0000 | 0.0000 |
| CurlyBracketsTest | VariablesTest | CurlyBrackets | Variables | olidAreaDefaultX | 0.0000 | 0.0000 |
| CurlyBracketsTest | VariablesTest | CurlyBrackets | Variables | worldY | 0.0000 | 0.0000 |
| CurlyBracketsTest | VariablesTest | CurlyBrackets | Variables | solidAreaDefaulty | 0.0000 | 0.0000 |
| CurlyBracketsTest | VariablesTest | CurlyBrackets | Variables | solidArea | java.awt.Rectangle[x=0,y=0,width=48,height=48] | java.awt.Rectangle[x=0,y=0,width=48,height=48] |
| CurlyBracketsTest | VariablesTest | CurlyBrackets | Variables | image | sun.awt.image.ToolkitImage@3632be31 | sun.awt.image.ToolkitImage@3632be31 |
| CurlyBracketsTest | VariablesTest | CurlyBrackets | Variables | name | CurlyBrackets | CurlyBrackets |
| CurlyBracketsTest | VariablesTest | CurlyBrackets | Variables | collision | true | true |
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| Main Class | Sub Class | Var Name | Sub Name | In_Var | Expect Data | Real Data |
------------------------------------------------------------------------------------------------------------------
| EntityTest | Entity | Init_Variable | GamePanel | gp |
Game.GamePanel[,0,0,768x576,layout=java.awt.FlowLayout,alignmentX=0.0,alignmentY=0.0,border=,flags=9,maximumSize=,minimumSize=,preferredSize=java.awt.Dimension[width=768,height=576]
] |
Game.GamePanel[,0,0,768x576,layout=java.awt.FlowLayout,alignmentX=0.0,alignmentY=0.0,border=,flags=9,maximumSize=,minimumSize=,preferredSize=java.awt.Dimension[width=768,height=576]
] |
| EntityTest | Entity | Init_Variable | xCoordinate | worldX | 0.0000 | 0.0000 |
| EntityTest | Entity | Init_Variable | yCoordinate | worldY | 0.0000 | 0.0000 |
| EntityTest | Entity | Init_Variable | speed | speed | 0.0000 | 0.0000 |
| EntityTest | Entity | Init_Variable | Image | up1 | null | null |
| EntityTest | Entity | Init_Variable | Image | up2 | null | null |
| EntityTest | Entity | Init_Variable | Image | down1 | null | null |
| EntityTest | Entity | Init_Variable | Image | down2 | null | null |
| EntityTest | Entity | Init_Variable | Image | left1 | null | null |
| EntityTest | Entity | Init_Variable | Image | left2 | null | null |
| EntityTest | Entity | Init_Variable | Image | right1 | null | null |
| EntityTest | Entity | Init_Variable | Image | right2 | null | null |
| EntityTest | Entity | Init_Variable | Direction | direction | null | null |
| EntityTest | Entity | Init_Variable | Counter | spriteCounter | 0.0000 | 0.0000 |
| EntityTest | Entity | Init_Variable | Number | spriteNum | 1.0000 | 1.0000 |
| EntityTest | Entity | Init_Variable | Rectangle | solidArea | java.awt.Rectangle[x=0,y=0,width=48,height=48] | java.awt.Rectangle[x=0,y=0,width=48,height=48] |
| EntityTest | Entity | Init_Variable | xCoordinate | solidAreaDefaultX | 0.0000 | 0.0000 |
| EntityTest | Entity | Init_Variable | yCoordinate | solidAreaDefaultY | 0.0000 | 0.0000 |
| EntityTest | Entity | Init_Variable | Number | spriteNum | 1.0000 | 1.0000 |
| EntityTest | Entity | Init_Variable | Rectangle | solidArea | false | false |
------------------------------------------------------------------------------------------------------------------
| Main Class | Sub Class | Var Name | Sub Name | In_Var | Expect Data | Real Data |
------------------------------------------------------------------------------------------------------------------
| EnemyTest | Enemy | Init_Variable | EnemyDirection | direction | down | down |
| EnemyTest | Enemy | Init_Variable | EnemySpeed | speed | 2.0000 | 2.0000 |
| EnemyTest | Enemy | Init_Variable | EnemyUp | direction | up | up |
| EnemyTest | Enemy | Init_Variable | EnemyDown | direction | down | down |
| EnemyTest | Enemy | Init_Variable | EnemyLeft | direction | left | left |
| EnemyTest | Enemy | Init_Variable | EnemyRight | direction | right | right |
| EnemyTest | Enemy | setImage | EnemyUp1Image | up1 | sun.awt.image.ToolkitImage@6ebc05a6 | sun.awt.image.ToolkitImage@6ebc05a6 |
| EnemyTest | Enemy | setImage | EnemyUp2Image | up2 | sun.awt.image.ToolkitImage@6ebc05a6 | sun.awt.image.ToolkitImage@6ebc05a6 |
| EnemyTest | Enemy | setImage | EnemyDown1Image | Down1 | sun.awt.image.ToolkitImage@6e6c3152 | sun.awt.image.ToolkitImage@6e6c3152 |
| EnemyTest | Enemy | setImage | EnemyDown2Image | Down2 | sun.awt.image.ToolkitImage@6e6c3152 | sun.awt.image.ToolkitImage@6e6c3152 |
| EnemyTest | Enemy | setImage | EnemyLeft1Image | left1 | sun.awt.image.ToolkitImage@50b494a6 | sun.awt.image.ToolkitImage@50b494a6 |
| EnemyTest | Enemy | setImage | EnemyLeft2Image | left2 | sun.awt.image.ToolkitImage@50b494a6 | sun.awt.image.ToolkitImage@50b494a6 |
| EnemyTest | Enemy | setImage | EnemyRight1Image | right1 | sun.awt.image.ToolkitImage@3cef309d | sun.awt.image.ToolkitImage@3cef309d |
| EnemyTest | Enemy | setImage | EnemyRight2Image | right2 | sun.awt.image.ToolkitImage@3cef309d | sun.awt.image.ToolkitImage@3cef309d |
| EnemyTest | Enemy | gameStatus | Status | gameLost | false | false |
------------------------------------------------------------------------------------------------------------------
| Main Class | Sub Class | Var Name | Sub Name | In_Var | Expect Data | Real Data |
------------------------------------------------------------------------------------------------------------------
| PlayerTest | Player | Init_Variable | PlayerScreenX | screenX | 360 | 360 |
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PlayerTest	Player	Init_Variable	PlayerScreenY	screenY	264	264
PlayerTest	Player	Init_Variable	Rectangle	solidArea	java.awt.Rectangle[x=0,y=0,width=48,height=48]	java.awt.Rectangle[x=0,y=0,width=48,height=48]
PlayerTest	Player	Init_Variable	xCoordinate	solidAreaDefaultX	0.0000	0.0000
PlayerTest	Player	Init_Variable	yCoordinate	solidAreaDefaultY	0.0000	0.0000
PlayerTest	Player	Init_Variable	xCoordinate	worldX	48.0000	48.0000
PlayerTest	Player	Init_Variable	yCoordinate	worldY	48.0000	48.0000
PlayerTest	Player	Init_Variable	PlayerSpeed	speed	4.0000	4.0000
PlayerTest	Player	Init_Variable	InitDirection	direction	down	down
PlayerTest	Player	Init_Variable	PlayerUp	direction	up	up
PlayerTest	Player	Init_Variable	PlayerDown	direction	down	down
PlayerTest	Player	Init_Variable	PlayerLeft	direction	left	left
PlayerTest	Player	Init_Variable	PlayerRight	direction	right	right
PlayerTest	Player	setImage	PlayerUp1Image	up1	sun.awt.image.ToolkitImage@3d99d22e	sun.awt.image.ToolkitImage@3d99d22e
PlayerTest	Player	setImage	PlayerUp2Image	up2	sun.awt.image.ToolkitImage@49fc609f	sun.awt.image.ToolkitImage@49fc609f
PlayerTest	Player	setImage	PlayerDown1Image	Down1	sun.awt.image.ToolkitImage@cd2dae5	sun.awt.image.ToolkitImage@cd2dae5
PlayerTest	Player	setImage	PlayerDown2Image	Down2	sun.awt.image.ToolkitImage@3a883ce7	sun.awt.image.ToolkitImage@3a883ce7
PlayerTest	Player	setImage	PlayerLeft1Image	left1	sun.awt.image.ToolkitImage@4973813a	sun.awt.image.ToolkitImage@4973813a
PlayerTest	Player	setImage	PlayerLeft2Image	left2	sun.awt.image.ToolkitImage@6321e813	sun.awt.image.ToolkitImage@6321e813
PlayerTest	Player	setImage	PlayerRight1Image	right1	sun.awt.image.ToolkitImage@79be0360	sun.awt.image.ToolkitImage@79be0360
PlayerTest	Player	setImage	PlayerRight2Image	right2	sun.awt.image.ToolkitImage@22a67b4	sun.awt.image.ToolkitImage@22a67b4
PlayerTest	Player	gameStatus	Status	gameLost	false	false

Main Class	Sub Class	Var Name	Sub Name	In_Var	Expect Data	Real Data
UITest	UI	Init_Object	GamePanel	gp	Game.GamePanel[,0,0,768x576,layout=java.awt.FlowLayout,alignmentX=0.0,alignmentY=0.0,border=,flags=8203,maximumSize=,minimumSize=,preferredSize=java.awt.Dimension[width=768,height=576]]	Game.GamePanel[,0,0,768x576,layout=java.awt.FlowLayout,alignmentX=0.0,alignmentY=0.0,border=,flags=8203,maximumSize=,minimumSize=,preferredSize=java.awt.Dimension[width=768,height=576]]
UITest	UI	Init_Object	Font	myFont	java.awt.Font[family=Cooper Black,name=Cooper Black,style=bold,size=25]	java.awt.Font[family=Cooper Black,name=Cooper Black,style=bold,size=25]
UITest	UI	Init_Object	Font	msgFont	java.awt.Font[family=Castellar,name=Castellar,style=plain,size=60]	java.awt.Font[family=Castellar,name=Castellar,style=plain,size=60]
UITest	UI	gameStatus	WonStatus	gameWon	true	true
UITest	UI	threadStatus	WonStatus	gameThread	null	null
UITest	UI	gameStatus	LostStatus	gameWon	true	true
UITest	UI	threadStatus	LostStatus	gameThread	null	null

Main Class	Sub Class	Var Name	Sub Name	In_Var	Expect Data	Real Data
GamePanel	MouseEvent	Save_Game	KeyPressed	getKeyCode()	83	83
GamePanel	MouseEvent	Save_Game	SavePressed	keyH	true	true