



P4 - List of essential tests in addition to Project 3, omitted some trivial tests

Class	Method	Testing For	Test Scenario / Input	Expected Scenario / Output
ItemHolder	setArrowList	can update the arrowList	Generate a list of arrows and update the list update to an empty list with no treasures	List updated correctly
	getArrowList	return a copy of arrow list return empty copy when it's empty	get a list of items and modify them list is empty	get correct list and cannot be modified explicitly return an empty list
Arrow	getDistance	correct # of caves left	path has tunnels and caves	only count caves, not tunnels
	getRow	get correct position row after moving	move the arrow in crooked tunnel	return new row number
			move the arrow in straight line thru caves	return correct number in the cave
			move through a cave which has no desired direction and ended there	stay in the cave
	getCol	get correct position column after moving	move the arrow in crooked tunnel	return new col number
			move the arrow in straight line thru caves	return correct number in the cave
			move through a cave which has no desired direction and ended there	stay in the cave
	setRow	update position row	update with valid number	correctly update row
			with invalid number	throw Exception
	setCol	update position col	update with valid number	correctly update column
			with invalid number	throw Exception
Otyugh	setLife	tell if the otyugh has lives left	been shot once	1
			been shot twice	0
		can walk through tunnel	not been shot	2
	getLife	return correct life	with new lives	update lives
	getCol	get correct position column	initialize the otyugh	return right col number
	getRow	get correct position row	initialize the otyugh	return right row number
Playercalculator	meetOtyugh	tell if player and otyugh at same position	same position	TRUE
			not same position	FALSE
	arrowCanWalk	if the arrow can walk through certain position	valid direction in tunnels	take crooked turns according to the tunnel
			invalid direction	arrow stopped
			reach destination	test if has otyugh and stop
	walkPlayer	walk with valid direction	valid direction	position updated correctly
		walk in wrapped map	walk out of boundary	position updated to anoither side correctly
		invalid -> exception	invalid direction	throw Exception
		meet the otyugh	otyugh has 2 lives	player is dead
			otyugh has 1 lives	has 50% of survival
			otyugh has 0 lives	passes peacefully
	getSmell	give correct smell levels regarding the distances	1 otyugh in 2 units	light smell
			1 otyugh in 1 unit	strong smell
			multiple otyughes in 2 units	strong smells

			other distributions	no smell
	shootArrow	walk the arrows correctly	through crooked tunnel	the arrow take turns
			through blocked cave	the arrow stops
			through straight cave	the arrow walks
		arrows hit otyugh	otyugh in destination cave	otyugh hit
			otyugh in middle way of path	otyugh not hit