

ILM – Law and Ordinance Unit Test Cases

FileName	Inputs.h
Test ID	ILM_L&O_IL0101-01
Function	loadLawOrdinance(string&)
Class	LawOrdinanceMap
Tester	Yudong Tao
Date	03/30/19
Purpose	Gets the law and ordinance factors
Preconditions	1.Loads the path to law-ordinance.csv 2.Prepare law-ordinance.csv
Test Data	law-ordinance.csv county_subregion_era_frame_1_weak,1.00000000,1.00000000,1.00000000,1.00000000,1.00000000,1.00000000, 0.99955274,0.99400157,0.98135657,0.96368725,0.94214278,0.92121969,0.90180233,0.88461085, 0.86724938,0.85391869,0.84532176,0.84117584,0.84492617,0.84908398,0.85794869,0.86929047, 0.88104590,0.89357152,0.90303375,0.91322420,0.92078590,0.92840196,0.93482589,0.93927550, 0.94371747,0.94715403,0.95019351,0.95306456,0.95498686,0.95730704,0.95946900,0.96114856, 0.96261642,0.96425080,0.96630148county_subregion_era_frame_1_medium,1.00000000,1.00000000,1.00000000,1.00000000,1.00000000, 1.00000000,1.00000000,0.99891486,0.99489337,0.98053991,0.95283801,0.92663168,0.88769938, 0.86137701,0.83117552,0.81138101,0.79290842,0.78506343,0.78485098,0.78807330,0.79946400, 0.81514675,0.83206921,0.84782770,0.86623626,0.88228633,0.89552679,0.90743164,0.91760505, 0.92609238,0.93283169,0.93821779,0.94363390,0.94701462,0.95013475,0.95274065,0.95457858, 0.95670903,0.95857148,0.96032984
Expected results	NO EXCEPTION
Actual results	NO EXCEPTION
Test results (Pass/Fail)	Pass
Comments	

FileName	Inputs.h
Test ID	ILM_L&O_IL0101-02

Function	loadLawOrdinance(string&)
Class	LawOrdinanceMap
Tester	Yudong Tao
Date	03/30/19
Purpose	Gets the law and ordinance factors
Preconditions	1.Loads the path to law-ordinance.csv 2.Do not prepare law-ordinance.csv
Test Data	No law-ordinance.csv exists
Expected results	Throw no file exception
Actual results	Throw no file exception
Test results (Pass/Fail)	Pass
Comments	

FileName	Inputs.h
Test ID	ILM_L&O_IL0101-03
Function	loadLawOrdinance(string&)
Class	LawOrdinanceMap
Tester	Yudong Tao
Date	03/30/19
Purpose	Gets the law and ordinance factors
Preconditions	1.Loads the path to law-ordinance.csv 2.Prepare law-ordinance.csv
Test Data	law-ordinance.csv (missing one factors in the first item) county_subregion_era_frame_1_weak,1.00000000,1.00000000,1.00000000,1.00000000, 00,1.00000000, 0.99955274,0.99400157,0.98135657,0.96368725,0.94214278,0.9212196 9,0.90180233,0.88461085, 0.86724938,0.85391869,0.84532176,0.84117584,0.84492617,0.8490839 8,0.85794869,0.86929047, 0.88104590,0.89357152,0.90303375,0.91322420,0.92078590,0.9284019 6,0.93482589,0.93927550, 0.94371747,0.94715403,0.95019351,0.95306456,0.95498686,0.9573070 4,0.95946900,0.96114856, 0.96261642,0.96425080,0.96630148county_subregion_era_frame_1_me dium,1.00000000,1.00000000,1.00000000,1.00000000,1.00000000, 1.00000000,1.00000000,0.99891486,0.99489337,0.98053991,0.9528380 1,0.92663168,0.88769938, 0.86137701,0.83117552,0.81138101,0.79290842,0.78506343,0.7848509 8,0.78807330,0.79946400,

	0.81514675,0.83206921,0.84782770,0.86623626,0.88228633,0.89552679,0.90743164,0.91760505,
	0.92609238,0.93283169,0.93821779,0.94363390,0.94701462,0.95013475,0.95274065,0.95457858,
	0.95670903,0.95857148,0.96032984
Expected results	Throw malformed factors line exception
Actual results	Throw malformed factors line exception
Test results (Pass/Fail)	Pass
Comments	

FileName	Inputs.h
Test ID	ILM_L&O_IL0101-04
Function	loadLawOrdinance(string&)
Class	LawOrdinanceMap
Tester	Yudong Tao
Date	03/30/19
Purpose	Gets the law and ordinance factors
Preconditions	1.Loads the path to law-ordinance.csv 2.Prepare law-ordinance.csv
Test Data	law-ordinance.csv (one more factors in the first item)
	county_subregion_era_frame_1_weak,1.00000000,1.00000000,1.00000000,1.00000000,1.00000000,
	0.99955274,0.99400157,0.98135657,0.96368725,0.94214278,0.92121969,0.90180233,0.88461085,
	0.86724938,0.85391869,0.84532176,0.84117584,0.84492617,0.84908398,0.85794869,0.86929047,
	0.88104590,0.89357152,0.90303375,0.91322420,0.92078590,0.92840196,0.93482589,0.93927550,
	0.94371747,0.94715403,0.95019351,0.95306456,0.95498686,0.95730704,0.95946900,0.96114856,
	0.96261642,0.96425080,0.96630148,1.00000000,1.00000000,1.00000000,1.00000000,1.00000000,1.00000000,
	1.00000000,1.00000000,0.99891486,0.99489337,0.98053991,0.95283801,0.92663168,0.88769938,
	0.86137701,0.83117552,0.81138101,0.79290842,0.78506343,0.78485098,0.78807330,0.79946400,
	0.81514675,0.83206921,0.84782770,0.86623626,0.88228633,0.89552679,0.90743164,0.91760505,
	0.92609238,0.93283169,0.93821779,0.94363390,0.94701462,0.95013475,0.95274065,0.95457858,
	0.95670903,0.95857148,0.96032984

Expected results	5,0.95274065,0.95457858,
Actual results	0.95670903,0.95857148,0.96032984
Test results (Pass/Fail)	Throw malformed factors line exception
Comments	Throw malformed factors line exception Pass

FileName	ILM
Test ID	ILM_L&O_IL0201-01
Function	policyProcess(IPolicy &, IMatrices, double, LawOrdinance*)
Class	SILM
Tester	Yudong Tao
Date	03/30/19
Purpose	Processes the parameter policy (pol) using SILM
Preconditions	<ol style="list-style-type: none"> 1.Loads standard information to object ParaInfo 2.Prepare pare_file.txt 3.Prepare county-surge.csv 4.Prepare valid_data.csv <p>1,32003,1955,Frame,8213497.15,8213497.15,682441.33,4846492.43,1604857.86,0,0.00,0.00,C,Clay, North,1,9,UNKNOWN,UNKNOWN,UNKNO WN,UNKNOWN,UNKNOWN,UNKNOWN,U NKNOWN,UNKNOWN,UNKNOWN,UNKNO WN,</p> <p>rect,1,-81.715057,30.095860,HO-2,NA,33</p> <ol style="list-style-type: none"> 5.Prepare wsc.1.dat 6.Prepare DamageRatio.txt 7.Prepare county2region.txt 8.Prepare law-ordinance.csv
Test Data	<p>para_file.txt</p> <p>1,0,1,1,1,Winds,Policies/valid_data.csv,v6.3 _pr_matrices,SubRegions,Results,1 wsc.1.dat</p> <p>Storm001 7/31/1915</p> <p>240</p> <p>2,40,46,50,53,54,56,57,58,59,60,61,61,62,6</p>

	2,63
	...
Expected results	The loss has been multiplied by corresponding L&O factor; if success return 0, otherwise throw exceptions
Actual results	The loss has been multiplied by corresponding L&O factor; return 0
Test results	Pass
Comments	

FileName	ILM
Test ID	ILM_L&O_IL0201-02
Function	policyProcess(IPolicy &, IMatrices, double, LawOrdinance*)
Class	SILM
Tester	Yudong Tao
Date	03/30/19
Purpose	Processes the parameter policy (pol) using SILM
Preconditions	<ol style="list-style-type: none"> 1.Loads standard information to object ParaInfo 2.Prepare pare_file.txt 3.Prepare county-surge.csv 4.Prepare valid_data.csv <p>1,32003,1955,Frame,8213497.15,8213497.15,682441.33,4846492.43,1604857.86,1,0.00,0.00,C,Clay, North,1,9,UNKNOWN,UNKNOWN,UNKNO WN,UNKNOWN,UNKNOWN,UNKNOWN,U NKNOWN,UNKNOWN,UNKNOWN,UNKNO WN,</p> <p>rect,1,-81.715057,30.095860,HO-2,NA,33</p> <ol style="list-style-type: none"> 5.Prepare wsc.1.dat 6.Prepare DamageRatio.txt 7.Prepare county2region.txt 8.Prepare law-ordinance.csv
Test Data	<p>para_file.txt</p> <p>1,0,1,1,1,Winds,Policies/valid_data.csv,v6.3 _pr_matrices,SubRegions,Results,1 wsc.1.dat</p>

	Storm001 7/31/1915
	240
	2,40,46,50,53,54,56,57,58,59,60,61,61,62,6
	2,63
	...
Expected results	The loss is not multiplied by corresponding L&O factor; if success return 0, otherwise throw exceptions
Actual results	The loss is not multiplied by corresponding L&O factor; return 0
Test results	Pass
Comments	

FileName	ILM
Test ID	ILM_L&O_IL0202-01
Function	companyProcess(ICompany *, IMatrices *, LawOrdinanceMap *)
Class	SILM
Tester	Yudong Tao
Date	03/30/19
Purpose	Processes the parameter exposure (companyHolder) using SILM
Preconditions	<ol style="list-style-type: none"> 1.Loads standard information to object ParaInfo 2.Prepare pare_file.txt 3.Prepare county-surge.csv 4.Prepare valid_data.csv
	1,32003,1955,Frame,8213497.15,8213497.15,682441.33,4846492.43,16048
	57.86,1,0.00,0.00,C,Clay,
	North,1,9,UNKNOWN,UNKNOWN,UNKNOWN,UNKNOWN,UNKNOWN,UNK
	NOWN,UNKNOWN,UNKNOWN,UNKNOWN,UNKNOWN,
	rect,1,-81.715057,30.095860,HO-2,NA,33
	5.Prepare wsc.1.dat
	6.Prepare DamageRatio.txt
	7.Prepare county2region.txt
	8.Prepare law-ordinance.csv
	9.Prepare v6.3_pr_matrices
	VM1_res_bldg_Msry_central_101_none_half-medium00-half-
	strong_94-01.csv
	...
Test Data	para_file.txt
	1,0,1,1,1,Winds,Policies/valid_data.csv,v6.3_pr_matrices,SubRegions,Results,1

Expected results	initialize fields; if success return 0
Actual results	return 0
Test results	Pass
Comments	

FileName	ILM
Test ID	ILM_L&O_IL0301-01
Function	setLawAndOrdinanceld(IPolicy &, int, string, string, int, string)
Class	PreProcessChecker
Tester	Yudong Tao
Date	03/30/19
Purpose	Sets the Id/Key of the L&O factors corresponding to this policy
Preconditions	<ol style="list-style-type: none"> 1.Loads standard information to object ParaInfo 2.Prepare pare_file.txt 3.Prepare law-ordinance.csv 4.Prepare valid_data.csv
Test Data	<p>1,32003,1955,Frame,8213497.15,8213497.15,682441.33,4846492.43,16048 57.86,1,0.00,0.00,C,Clay, North,1,9,UNKNOWN,UNKNOWN,UNKNOWN,UNKNOWN,UNKNOWN,UNK NOWN,UNKNOWN,UNKNOWN,UNKNOWN,UNKNOWN, rect,1,-81.715057,30.095860,HO-2,NA,33 para_file.txt</p>
Expected results	initialize pol.lold as 19_none_Pre60_frame_stories_strength; return true;
Actual results	pol.lold = 19_none_Pre60_frame_stories_strength; return true;
Test results	Pass
Comments	