PMD report

Problems found

#	File	Line	Problem
1	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\controller\InputController.java	21	The class 'InputController' has a Modified Cyclomatic Complexity of 6 (Highest = 29).
2	$C: \label{lem:controller} C: lem:co$	21	The class 'InputController' has a Standard Cyclomatic Complexity of 6 (Highest = 29).
3	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\controller\InputController.java	25	Private field 'game' could be made final; it is only initialized in the declaration or constructor.
4	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\controller\InputController.java	26	Private field 'mainInstance' could be made final; it is only initialized in the declaration or constructor.
5	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\controller\InputController.java	50	Avoid really long methods.
6	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\controller\InputController.java	50	The method 'initPlayerInput' has a Modified Cyclomatic Complexity of 29.
7	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\controller\InputController.java	50	The method 'initPlayerInput' has a Standard Cyclomatic Complexity of 29.
8	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\controller\InputController.java	50	The method 'initPlayerInput()' has an NPath complexity of 13825, current threshold is 200
9	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\controller\MenuController.java	16	Private field 'mainInstance' could be made final; it is only initialized in the declaration or constructor.
10	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\controller\MenuController.java	17	Private field 'viewInstance' could be made final; it is only initialized in the declaration or constructor.
11	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\controller\MenuController.java	18	Private field 'gameMenuType' could be made final; it is only initialized in the declaration or constructor.
12	$C: \label{lem:controller} C: lem:co$	19	Private field 'game' could be made final; it is only initialized in the declaration or constructor.
13	$C: \label{lem:controller} C: lem:co$	13	The class 'MainMenuController' is suspected to be a Data Class (WOC=0.000%, NOPA=0, NOAM=4, WMC=6)
14	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\main\Main.java	40	This class has too many methods, consider refactoring it.
15	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\main\Main.java	43	Private field 'controllerList' could be made final; it is only initialized in the declaration or constructor.
16	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\main\Main.java	54	Private field 'gameRunningLatch' could be made final; it is only initialized in the declaration or constructor.
17	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\CollisionDetection.java	16	The class 'CollisionDetection' has a Modified Cyclomatic Complexity of 13 (Highest = 36).
18	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\CollisionDetection.java	16	The class 'CollisionDetection' has a Standard Cyclomatic Complexity of 13 (Highest = 36).
19	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\CollisionDetection.java	21	Avoid really long methods.
20	$C: \label{lem:condition} C: lem:condi$	21	The constructor 'CollisionDetection' has a Modified Cyclomatic Complexity of 36.
21	$C: \label{lem:condition} C: lem:condi$	21	The constructor 'CollisionDetection' has a Standard Cyclomatic Complexity of 36.

22	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\CollisionDetection.java	21	The constructor 'CollisionDetection(PlayerComponent)' has an NPath complexity of 2457600, current threshold is 200
23	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\CollisionDetection.java	26	These nested if statements could be combined
24	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\CollisionDetection.java	54	These nested if statements could be combined
25	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\CollisionDetection.java	90	These nested if statements could be combined
26	$\label{lem:condition} C:\Users\Erik\Idea\Projects\OOP-Programmeringsprojekt\src\main\java\edu\chalmers\model\Generic\Platformer.java$	24	Perhaps 'mapManager' could be replaced by a local variable.
27	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\GenericPlatformer.java	26	Perhaps 'collisionDetection' could be replaced by a local variable.
28	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\PlayerComponent.java	23	This class has too many methods, consider refactoring it.
29	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\PlayerComponent.java	25	This final field could be made static
30	$C: \label{lem:condition} C: lem:condi$	26	Private field 'weapons' could be made final; it is only initialized in the declaration or constructor.
31	$\label{lem:condition} C:\Users\Erik\Idea\Projects\OOP-Programmeringsprojekt\src\main\java\edu\chalmers\model\Player\Component.java$	29	Private field 'maxHealth' could be made final; it is only initialized in the declaration or constructor.
32	$C: \label{lem:condition} C: lem:condi$	31	Private field 'moveSpeed' could be made final; it is only initialized in the declaration or constructor.
33	$C: \label{lem:condition} C: lem:condi$	32	Private field 'jumpHeight' could be made final; it is only initialized in the declaration or constructor.
34	$C: \label{lem:condition} C: lem:condi$	34	Private field 'buildRangeTiles' could be made final; it is only initialized in the declaration or constructor.
35	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\PlayerComponent.java	35	Private field 'physics' could be made final; it is only initialized in the declaration or constructor.
36	$C: \label{lem:condition} C: lem:condi$	18	Private field 'mapManager' could be made final; it is only initialized in the declaration or constructor.
37	$C: \label{lem:condition} C: lem:condi$	19	Private field 'buildRangeTiles' could be made final; it is only initialized in the declaration or constructor.
38	$C: \label{lem:condition} C: lem:condi$	106	Avoid unnecessary ifthenelse statements when returning booleans
39	$C: \label{lem:condition} C: lem:condi$	13	Private field 'blockMap' could be made final; it is only initialized in the declaration or constructor.
40	$C: \label{lem:condition} C: lem:condi$	50	These nested if statements could be combined
41	$C: \label{lem:condition} C: lem:condi$	27	Private field 'currentBlock' could be made final; it is only initialized in the declaration or constructor.
42	$\label{lem:condition} C:\Users\Erik\Idea\Projects\OOP-Programmeringsprojekt\src\main\java\edu\chalmers\model\enemy\Enemy\Component.java$	19	This final field could be made static
43	C: lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	20	Private field 'enemyType' could be made final; it is only initialized in the declaration or constructor.
44	C: lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	21	Private field 'physics' could be made final; it is only initialized in the declaration or constructor.
45	$C: \label{lem:condition} C: lem:condi$	28	Private field 'damage' could be made final; it is only initialized in the declaration or constructor.
46	$C: \label{lem:condition} C: lem:condi$	29	Private field 'blockDamage' could be made final; it is only initialized in the declaration or constructor.
	C:\Users\Erik\IdeaProjects\OOP-		A class which only has private

47	$Programmering sprojekt \ \ length \ \ length \ \ \ length \ \ \ \ length \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	22	constructors should be final
48	$C: \label{lem:condition} C: lem:condi$	8	The class 'StatMultiplier' is suspected to be a Data Class (WOC=0.000%, NOPA=0, NOAM=4, WMC=14)
49	C: lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	19	Possible God Class (WMC=47, ATFD=69, TCC=29.846%)
50	C: lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	21	Private field 'thisEnemy' could be made final; it is only initialized in the declaration or constructor.
51	$C: \label{lem:condition} C: lem:condi$	22	Private field 'player' could be made final; it is only initialized in the declaration or constructor.
52	C: lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	16	Possible God Class (WMC=63, ATFD=118, TCC=31.667%)
53	$C:\Users\Erik\Idea Projects\OOP-Programmering sprojekt\src\main\java\edu\chalmers\model\enemy\ai\Movement AI. java$	20	Private field 'AI' could be made final; it is only initialized in the declaration or constructor.
54	$C: \label{lem:condition} C: lem:condi$	81	The method 'doJump()' has a cyclomatic complexity of 13.
55	$C: \label{lem:condition} C: lem:condi$	81	The method 'doJump()' has an NPath complexity of 384, current threshold is 200
56	$C: \label{lem:condition} C: lem:condi$	133	The method 'doFloatingPlatformMovement()' has a cyclomatic complexity of 13.
57	$C: \label{lem:condition} C: lem:condi$	185	The method 'enemyStuckUnderPlatformFix()' has a cyclomatic complexity of 12.
58	$C: \label{lem:condition} C: lem:condi$	17	The class 'PlatformAI' has a Modified Cyclomatic Complexity of 4 (Highest = 10).
59	$C: \label{lem:condition} C: lem:condi$	17	The class 'PlatformAI' has a Standard Cyclomatic Complexity of 4 (Highest = 10).
60	$C: \label{lem:condition} C: lem:condi$	21	Private field 'AI' could be made final; it is only initialized in the declaration or constructor.
61	$C: \label{lem:condition} C: lem:condi$	23	Private field 'platformYDeltaList' could be made final; it is only initialized in the declaration or constructor.
62	$C: \label{lem:condition} C: lem:condi$	24	Private field 'platformAndYDeltaMap' could be made final; it is only initialized in the declaration or constructor.
63	$C: \label{lem:condition} C: lem:condi$	63	The method 'getClosestPlatform' has a Modified Cyclomatic Complexity of 10.
64	$C: \label{lem:condition} C: lem:condi$	63	The method 'getClosestPlatform' has a Standard Cyclomatic Complexity of 10.
65	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\enemy\ai\PlatformAI.java	63	The method 'getClosestPlatform()' has a cyclomatic complexity of 10.
66	$C: \label{lem:condition} C: lem:condi$	80	Deeply nested ifthen statements are hard to read
67	$C: \label{lem:condition} C: lem:condi$	106	These nested if statements could be combined
68	C: lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	13	Private field 'AI' could be made final; it is only initialized in the declaration or constructor.
69	$C: \label{lem:condition} C: lem:condi$	22	Private field 'higherHorizontalRaycastDeltaHeight' could be made final; it is only initialized in the declaration or constructor.
	C:\Users\Erik\IdeaProjects\OOP-		Private field 'higherHorizontalRaycastLength' could

$70 \ Programmering sprojekt \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	23	be made final; it is only initialized in the declaration or constructor.
71 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\enemy\ai\RaycastAI.java	24	Private field 'horizontalRaycastLength' could be made final; it is only initialized in the declaration or constructor.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\enemy\ai\RaycastAI.java	25	Private field 'downwardRaycastLength' could be made final; it is only initialized in the declaration or constructor.
73 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\enemy\ai\RaycastAI.java	26	Private field 'upwardRaycastLength' could be made final; it is only initialized in the declaration or constructor.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\enemy\ai\RaycastAI.java	27	Private field 'entityRaycastLength' could be made final; it is only initialized in the declaration or constructor.
75 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\enemy\ai\RaycastAI.java	28	Private field 'playerPlatformRaycastLength' could be made final; it is only initialized in the declaration or constructor.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\wave\SpawnEnemyRunnable.java	23	Private field 'random' could be made final; it is only initialized in the declaration or constructor.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\wave\SpawnEnemyRunnable.java	26	Private field 'shortSpawnMs' could be made final; it is only initialized in the declaration or constructor.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\wave\SpawnEnemyRunnable.java	27	Private field 'longSpawnMs' could be made final; it is only initialized in the declaration or constructor.
79 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\wave\SpawnEnemyRunnable.java	28	Private field 'player' could be made final; it is only initialized in the declaration or constructor.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\wave\SpawnEnemyRunnable.java	30	Private field 'enemyFactory' could be made final; it is only initialized in the declaration or constructor.
81 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\wave\WaveManager.java	21	This class has too many methods, consider refactoring it.
82 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\wave\WaveManager.java	26	Private field 'spawnEnemyRunnable' could be made final; it is only initialized in the declaration or constructor.
83 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\weapon\Weapon.java	21	Private field 'weaponType' could be made final; it is only initialized in the declaration or constructor.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\weapon\Weapon.java	22	Private field 'magazineSize' could be made final; it is only initialized in the declaration or constructor.
85 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\weapon\Weapon.java	23	Private field 'reloadTimerMilliseconds' could be made final; it is only initialized in the declaration or constructor.
86 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\weapon\Weapon.java	24	Private field 'damage' could be made final; it is only initialized in the declaration or constructor.
87 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\weapon\Weapon.java	25	Private field 'projectileSpeed' could be made final; it is only initialized in the declaration or constructor.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\weapon\WeaponProjectile.java	23	Private field 'physics' could be made final; it is only initialized in the declaration or constructor.
89 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\weapon\WeaponProjectile.java	26	Private field 'mousePoint' could be made final; it is only initialized in the declaration or constructor.
90 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\model\weapon\WeaponProjectile.java	27	Private field 'projectileSpeed' could be made final; it is only initialized in the

			declaration or constructor.
91	$C: \label{lem:condition} C: lem:condi$	28	Private field 'shooterSizeOffsetToCenter' could be made final; it is only initialized in the declaration or constructor.
92	$C: \label{lem:condition} C: lem:condi$	29	Private field 'projectileSizeW' could be made final; it is only initialized in the declaration or constructor.
93	$C: \label{lem:condition} C: lem:condi$	30	Private field 'projectileSizeH' could be made final; it is only initialized in the declaration or constructor.
94	$C: \label{lem:condition} C: lem:condi$	32	Private field 'testing' could be made final; it is only initialized in the declaration or constructor.
95	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\services\Coords.java	10	The class 'Coords' is suspected to be a Data Class (WOC=28.571%, NOPA=0, NOAM=4, WMC=10)
96	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\services\TileMap.java	23	Private field 'dataLayer' could be made final; it is only initialized in the declaration or constructor.
97	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\services\TileMap.java	24	Private field 'emptyTile' could be made final; it is only initialized in the declaration or constructor.
98	$C: \label{lem:condition} C: lem:condi$	21	Private field 'transparentRects' could be made final; it is only initialized in the declaration or constructor.
99	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\view\game\ExitMenu.java	21	Perhaps 'titleText' could be replaced by a local variable.
100	C.\Users\Frik\IdeaProjects\OOP-	23	Perhaps 'backgroundPane' could be replaced by a local variable.
101	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\view\game\GameOverView.java	23	Perhaps 'titleText' could be replaced by a local variable.
102	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\view\game\GameOverView.java	25	Perhaps 'backgroundPane' could be replaced by a local variable.
103	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\view\game\GameUI.java	18	This final field could be made static
104	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\view\game\GameUI.java	19	This final field could be made static
	C. Harra Erile Idea Praincto ACD	20	Private field 'game' could be made final; it is only initialized in the declaration or constructor.
106	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\view\game\GameUI.java	22	Perhaps 'healthBackground' could be replaced by a local variable.
107	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\view\main\MainMenu.java	18	Perhaps 'titleText' could be replaced by a local variable.
108	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\view\main\PlayMenu.java	18	Perhaps 'titleText' could be replaced by a local variable.
109	$C: \label{lem:condition} C: lem:condi$	17	The class 'SettingsMenu' is suspected to be a Data Class (WOC=20.000%, NOPA=0, NOAM=8, WMC=10)
110	C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\main\java\edu\chalmers\view\main\SettingsMenu.java	18	Perhaps 'titleText' could be replaced by a local variable.
111	$C: \label{lem:condition} C: lem:condi$	17	The class 'ActionButton' is suspected to be a Data Class (WOC=0.000%, NOPA=3, NOAM=2, WMC=7)
112	$C: \label{lem:condition} C: lem:condi$	16	All methods are static. Consider using a utility class instead. Alternatively, you could add a private constructor or make the class abstract to silence this warning.
113	$C: \label{lem:condition} C: lem:condi$	24	All methods are static. Consider using a utility class instead. Alternatively, you could add a private constructor or make the class abstract to silence this warning.
114	$C: \label{lem:controller} C: lem:co$	254	Avoid really long methods.

C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\test\java\edu\chalmers\controller\TestMainControllers.java	254	The method 'testSettingsMenuController()' has a NCSS line count of 62.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\test\java\edu\chalmers\model\TestPlayerComponent.java	20	This class has too many methods, consider refactoring it.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\test\java\edu\chalmers\model\TestPlayerComponent.java	117	assertTrue(!expr) can be replaced by assertFalse(expr)
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\test\java\edu\chalmers\model\TestPlayerComponent.java	126	assertTrue(!expr) can be replaced by assertFalse(expr)
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\test\java\edu\chalmers\model\building\TestBuildManager.java	25	Private field 'mapManager' could be made final; it is only initialized in the declaration or constructor.
120 C:\Users\Erik\IdeaProjects\OOP-Programmeringsprojekt\src\test\java\edu\chalmers\model\building\TestBuildManager.java	26	Private field 'buildManager' could be made final; it is only initialized in the declaration or constructor.
121 C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\test\java\edu\chalmers\model\building\blocks\TestPermanentBlock.java	12	Private field 'permanentBlock' could be made final; it is only initialized in the declaration or constructor.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\test\java\edu\chalmers\model\enemy\TestEnemyComponent.java	23	This class has too many methods, consider refactoring it.
$123 \begin{array}{l} C: \label{localize} C: \label{localize} C: \label{localize} C: \label{localize} Programmering sprojekt local$	22	This class has too many methods, consider refactoring it.
C:\Users\Erik\IdeaProjects\OOP- Programmeringsprojekt\src\test\java\edu\chalmers\model\enemy\ai\TestMovementAI.java	113	Avoid really long methods.