

## Evaluation Report

Higher Quality



Application : Earth

Artefact name : Earth

Artefact type : Application

Author : guest

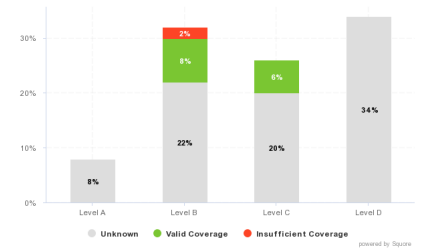
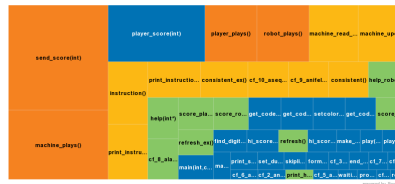
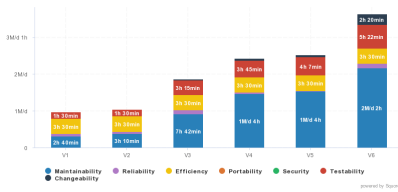
Model : software\_analytics

Version : V6

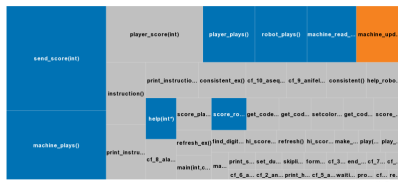
Version date : 2018.12.05 02:00:00 CET

[View Square dashboard](#)

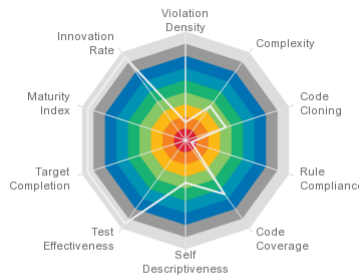
powered by Square



Technical Debt - Overall Trend



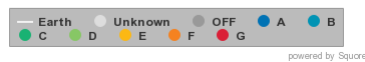
Function Complexity Map



Coverage Compliance per Safety Level

Function Coverage Map

Analytics KPI breakdown



# Score Card

## Complexity

Ratio of complex modules	10.8%	<span>C</span> <span>→</span>
Number of Modules	50	<span>i</span>
Class Complexity Ratio	0.0%	<span>A</span> <span>→</span>
Number of Classes	3	<span>i</span>

## Complexity Volume

Complexity Volume Ratio	36.04%	<span>E</span> <span>→</span>
Executable Statements	1,476 (Total Statements)	<span>i</span>
Complexity Volume	532 ('F' or 'G' statements)	<span>i</span>
Volume of "G" Complexity	0	<span>i</span>
Volume of "F" Complexity	532	<span>i</span>

## Test Coverage Thresholds

Statement Coverage Threshold for Critical Factor A	80	<span>i</span>
Statement Coverage Threshold for Critical Factor B	100	<span>i</span>
Statement Coverage Threshold for Critical Factor C	100	<span>i</span>
Statement Coverage Threshold for Critical Factor D	100	<span>i</span>
Branch Coverage Threshold for Critical Factor A	50	<span>i</span>
Branch Coverage Threshold for Critical Factor B	80	<span>i</span>
Branch Coverage Threshold for Critical Factor C	100	<span>i</span>
Branch Coverage Threshold for Critical Factor D	100	<span>i</span>
MCDC Coverage Threshold for Critical Factor A	0	<span>i</span>
MCDC Coverage Threshold for Critical Factor B	50	<span>i</span>
MCDC Coverage Threshold for Critical Factor C	80	<span>i</span>
MCDC Coverage Threshold for Critical Factor D	100	<span>i</span>
Coverage Rating is based To Be Tested modules	1	<span>i</span>

## Test Strategy Thresholds

VG Test Threshold	-1	<span>i</span>
PATH Test Threshold	-1	<span>i</span>
LEVL Test Threshold	-1	<span>i</span>
VOCF Test Threshold	-1	<span>i</span>

## Coding Standard Compliance

Coding Standard Compliance	47.4%	<span>i</span>
Non Compliant Standards	10	<span>i</span>
Non Conformity Count	203	<span>i</span>
Non Conformity Density	96/KLoc	<span>i</span>
Coding Standards	19	<span>i</span>

# Additional Information

## Measures

Name	Current Value	Reference Value
#Tests	0	0 =
#Failed	0	0 =

## Indicators

Name	Current Value	Reference Value
Code Cloning	0.12 Level D	0 Level A
Code Coverage Compliance	90.3% Level B	? Unknown
Complexity	0.14 Level D	0.14 Level D
Innovation Rate	- Unknown	- Unknown
Maturity Index	- Unknown	- Unknown
Rule Compliance	47.4% Level G	68.4% Level E
Self Descriptiveness	76% Level D	82.2% Level C
Test Effectiveness	? Unknown	? Unknown
Tickets Completion Rate	- Unknown	- Unknown
Violations Density	629 Pts/KLoc Level F	539 Pts/KLoc Level F

# Action Items

<b>Id</b>	<b>Name</b>	<b>Since</b>	<b>Scope</b>	<b>Priority</b>	<b>Status</b>
<a href="#">20</a>	More 'Blocker' or 'Critical' rules	V6	C Function	High	Open
<i>The object hi_scores_disp(int) should be reviewed , it has a higher number of 'Blocker' or 'Critical' rules violated since the previous version.</i>					
<ul style="list-style-type: none"><li>- Code Status reveals that development is in progress (=1).</li><li>- Artefact has a higher number of 'Blocker' or 'Critical' findings</li><li>- Source code lines have been modified, removed or added</li><li>- Artefact had source code in previous version</li></ul>					
<a href="#">25</a>	More 'Blocker' or 'Critical' rules	V6	C Function	High	Open
<i>The object get_code_robot(guess*) should be reviewed , it has a higher number of 'Blocker' or 'Critical' rules violated since the previous version.</i>					
<ul style="list-style-type: none"><li>- Code Status reveals that development is in progress (=1).</li><li>- Artefact has 'Blocker' or 'Critical' findings</li><li>- Artifact is new.</li></ul>					
<a href="#">30</a>	More 'Blocker' or 'Critical' rules	V6	C Function	High	Open
<i>The object robot_plays() should be reviewed , it has a higher number of 'Blocker' or 'Critical' rules violated since the previous version.</i>					
<ul style="list-style-type: none"><li>- Code Status reveals that development is in progress (=1).</li><li>- Artefact has 'Blocker' or 'Critical' findings</li><li>- Artifact is new.</li></ul>					
<a href="#">15</a>	More 'High' or 'Major' rules	V5	C Function	Medium	Open
<i>The object player_score(int) has a higher number of 'High' or 'Major' rules violated since the previous version.</i>					
<ul style="list-style-type: none"><li>- Code Status reveals that development is in progress (=1).</li><li>- Artefact should be reviewed due to higher number of 'High' or 'Major' findings</li><li>- Source code lines have been modified, removed or added</li><li>- Artefact had source code in previous version</li></ul>					
<a href="#">17</a>	More 'High' or 'Major' rules	V6	C Function	Medium	Open
<i>The object machine_plays() has a higher number of 'High' or 'Major' rules violated since the previous version.</i>					
<ul style="list-style-type: none"><li>- Code Status reveals that development is in progress (=1).</li><li>- Artefact should be reviewed due to higher number of 'High' or 'Major' findings</li><li>- Source code lines have been modified, removed or added</li><li>- Artefact had source code in previous version</li></ul>					
<a href="#">19</a>	More 'High' or 'Major' rules	V6	C Function	Medium	Open
<i>The object hi_scores_disp(int) has a higher number of 'High' or 'Major' rules violated since the previous version.</i>					
<ul style="list-style-type: none"><li>- Code Status reveals that development is in progress (=1).</li><li>- Artefact should be reviewed due to higher number of 'High' or 'Major' findings</li><li>- Source code lines have been modified, removed or added</li><li>- Artefact had source code in previous version</li></ul>					
<a href="#">22</a>	More 'High' or 'Major' rules	V6	C Function	Medium	Open
<i>The object score_robot() has a higher number of 'High' or 'Major' rules violated since the previous version.</i>					
<ul style="list-style-type: none"><li>- Code Status reveals that development is in progress (=1).</li><li>- Artefact has 'High' or 'Major' findings</li><li>- Artifact is new.</li></ul>					

## Action Items

<b>Id</b>	<b>Name</b>	<b>Since</b>	<b>Scope</b>	<b>Priority</b>	<b>Status</b>
<a href="#">24</a>	More 'High' or 'Major' rules	V6	C Function	Medium	Open
<i>The object <code>get_code_robot(guess*)</code> has a higher number of 'High' or 'Major' rules violated since the previous version.</i>					
<ul style="list-style-type: none"><li>- Code Status reveals that development is in progress (=1).</li><li>- Artefact has 'High' or 'Major' findings</li><li>- Artifact is new.</li></ul>					
<a href="#">26</a>	More 'High' or 'Major' rules	V6	C Function	Medium	Open
<i>The object <code>help_robot(int*)</code> has a higher number of 'High' or 'Major' rules violated since the previous version.</i>					
<ul style="list-style-type: none"><li>- Code Status reveals that development is in progress (=1).</li><li>- Artefact has 'High' or 'Major' findings</li><li>- Artifact is new.</li></ul>					
<a href="#">27</a>	More 'High' or 'Major' rules	V6	C Function	Medium	Open
<i>The object <code>robot_plays()</code> has a higher number of 'High' or 'Major' rules violated since the previous version.</i>					
<ul style="list-style-type: none"><li>- Code Status reveals that development is in progress (=1).</li><li>- Artefact has 'High' or 'Major' findings</li><li>- Artifact is new.</li></ul>					

## Top 10 most changed artefacts

Rating	Artefact	Path
C	print_instructions_fr()	core/write.c
D	player_score(int)	apps/score.c
C	print_instructions_gb()	core/write.c
D	machine_plays()	apps/machine.c
A	machine_print_score(int)	apps/machine.c
E	machine.c	apps
E	write.c	core
E	hi_scores_disp(int)	apps/score.c
A	skipline(int)	core/base.c
C	main(int,char*[])	apps/master.c

# Findings

Type: [Violations](#)

Total: 245

Delta: 102

Practice	Occ.	Delta	Data Provider	Severity	Remediation Cost
Recursion are not allowed	1	+1	Squan Sources	Critical	High
Goto shall not be used	1	+1	Squan Sources	Major	Medium
Missing Break	6	+2	Squan Sources	Critical	Low
Commented-out Source	1	+1	Squan Sources	Major	Low
Multiple exits are not	39	+1	Squan Sources	Minor	Low
Assignment in Boolean	16	+10	Squan Sources	Minor	Low
Missing compound if	89	+41	Squan Sources	Minor	Tiny
Missing compound	47	+19	Squan Sources	Minor	Tiny
Cloned Functions	10	+8	Squan Sources	Major	Medium
Cloned Algorithmic	4	+4	Squan Sources	Major	Medium
Cloned Files	2	+2	Squan Sources	Major	Medium
Avoid Duplicated Blocks in	8	+6	Squan Sources	Major	Low
'abort, exit, getenv or	3	+1	Squan Sources	Major	Medium
IO Functions shall not be	3	0	Squan Sources	Major	Medium
'atof, atoi or atol' shall not	1	0	Squan Sources	Major	Medium
Time Handling Functions	1	0	Squan Sources	Major	Medium
Common realloc mistake:	5	0	Cppcheck	Blocking	Medium
Dynamic Memory Allocation	2	0	Squan Sources	Major	Medium
Missing final else	2	+1	Squan Sources	Minor	Low
TODO shall not be	1	+1	Squan Sources	Minor	Low
Fallthrough shall be avoided	2	+2	Squan Sources	Blocking	Low
Risky Empty Statement	1	+1	Squan Sources	Blocking	Low

# Findings

Type: [Improved practices](#)

Total: 0

Delta: 0



# Findings

Type: [Deteriorated practices](#)

Total: 233

Delta: 102

Practice	Occ.	Delta	Data Provider	Severity	Remediation Cost
Recursion are not allowed	1	+1	Squan Sources	Critical	High
Goto shall not be used	1	+1	Squan Sources	Major	Medium
Missing Break	6	+2	Squan Sources	Critical	Low
Commented-out Source	1	+1	Squan Sources	Major	Low
Multiple exits are not	39	+1	Squan Sources	Minor	Low
Assignment in Boolean	16	+10	Squan Sources	Minor	Low
Missing compound if	89	+41	Squan Sources	Minor	Tiny
Missing compound	47	+19	Squan Sources	Minor	Tiny
Cloned Functions	10	+8	Squan Sources	Major	Medium
Cloned Algorithmic	4	+4	Squan Sources	Major	Medium
Cloned Files	2	+2	Squan Sources	Major	Medium
Avoid Duplicated Blocks in	8	+6	Squan Sources	Major	Low
'abort, exit, getenv or	3	+1	Squan Sources	Major	Medium
Missing final else	2	+1	Squan Sources	Minor	Low
TODO shall not be	1	+1	Squan Sources	Minor	Low
Fallthrough shall be avoided	2	+2	Squan Sources	Blocking	Low
Risky Empty Statement	1	+1	Squan Sources	Blocking	Low

