RESOURCE STANDARD METRICS FOR C/C++, JAVA AND C#

Resource Standard Metrics provides a standardized approach to measure the quantity and quality of source code within a module or a project. This program can analyze a C, C++, Java or C# source for metrics and semantic quality problems that most compilers do not identify.

RSM Features

Resource Standard Metrics provides a combination of features not found in any other metrics tool. RSM is a shell-based tool, meaning that you must use a command shell or any UNIX shell or Xterm you desire to run RSM. This allows RSM to integrate seamlessly into Visual Studio, Kawa and other IDE's. RSM utilizes a license file and configuration file on start up.

Key Features :

- Use one tool across all project languages for K&R and ANSI C, ANSI C++ and Java 2.0.
- Interactive with Visual Studio.
- Integrated with Eclipse.
- Integrated with JBuilder.
- Create reports in CSV, HTML, XML, TEXT format.
- Simple command line operation with runtime options.

RSM Syntax

C:\Program Files\MSquared\M2 RSM\rsm.exe -switch or -switch[option] or -switch["compound option"] filenames or wild cards

Reports and User Switches general information

?	General Information
a	Memory Allocation
b	Benchmarks Timing
C	CSV File Output
c	Complexity
D	De-Character Mode
d	Deterministic Mode
E	Comments & Strings
e	Estimation Factors
F	File List Input Mode
f	Function Analysis/FP
H	HTML Output Mode
h	Help Manual
i	Inheritance Tree
k	Keys for sorting
l	Function Name List
m	Macro Analysis
N	Quality Notice Format
n	Quality Notices
O	Output to a File
o	Object Class Analysis
p	Printable Code Format
X	XML File Output

These are some of the switches which need to be used in syntax of RSM .

Example

(A.)


```
:\SW_DEV_TOOL\RSM\rsm>rsm.exe -ls C:\Users\admin\Downloads\ui\Wolfman_UI_IAP\S
\main.c
                    Report Banner - Edit rsm.cfg File

            Resource Standard Metrics (TM) for C, C++, C# and Java
                    Version 7.75 - mSquaredTechnologies.com

License Type: Shareware Evaluation License
Licensed To : Shareware End User - Distribute Freely
License No. : SW1380                        License Date: Dec 05, 1998
Build Date  : Sep  2 2009                    Run Date: Oct 01, 2020
(C)1996-2009 M Squared Technologies LLC
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License File: .\\rsm.lic
Config. File: .\\rsm.cfg
Command Line: -Ts C:\Users\admin\Downloads\ui\Wolfman_UI_IAP\Src\main.c
UDQN File    : .\\rsm_udqn.cfg

Wed Sep 30 16:02:56 2020
C:\Users\admin\Downloads\ui\Wolfman_UI_IAP\Src\main.c
------------------------------------------------------------------------

                ~~ Project Analysis For 1 Files ~~
------------------------------------------------------------------------

                    ~~ Total Project Summary ~~

LOC 465        eLOC 374      lLOC 272        Comment 251      Lines      860
Average per File, metric/1 files
LOC 465        eLOC 374      lLOC 272        Comment 251      Lines      860
------------------------------------------------------------------------

                      ~~ File Summary ~~

C Source Files *.c ....:      1  C/C++ Include Files *.h:          0
C++ Source Files *.c* .:      0  C++ Include Files *.h* :          0
C# Source Files *.cs ..:      0  Java Source File *.jav*:          0
Other File Count ......:      0  Total File Count ......:          1


        Shareware evaluation licenses process only 20 files.
        Paid licenses enable processing for an unlimited number of files.
_____

                Report Banner - Edit rsm.cfg File
```

In this example, we tried to analyse the code for number of LOC ,eLOC, ILOC lines involved in the file.

(B.)

Here, we tried to analysis code according to bar code standards.

Installation process

Step 1: Download the zip file for RSM from M squared technologies offical site.
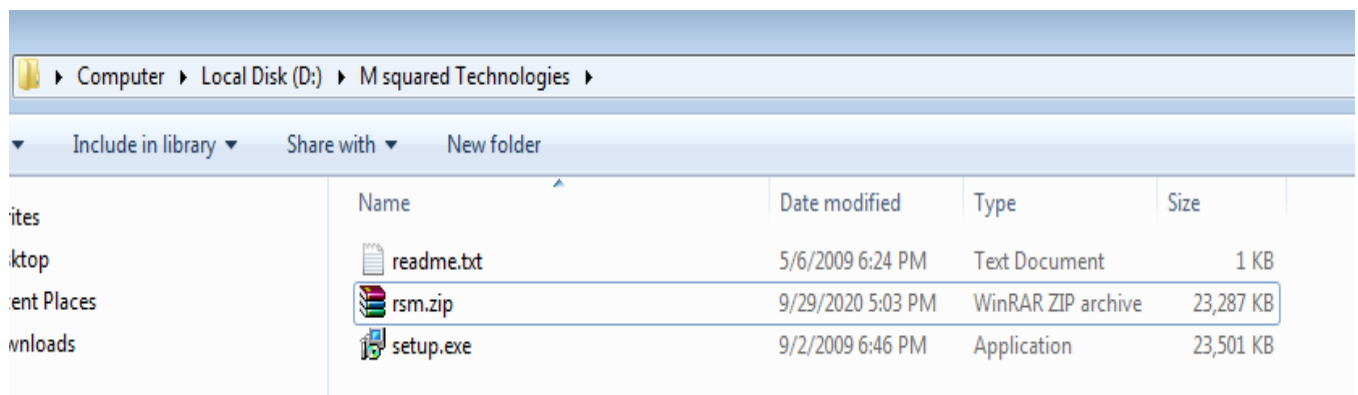
https://msquaredtechnologies.com/RSM-Download.html

Step 2: Unzip the file in the desired folder

Step 3: Run the setup.exe file .

Usage of RSM

Open command prompt and move to the directory where setup.exe file is present
and run the command rsm.exe

```
D:\M squared Technologies>rsm.exe
                Report Banner - Edit rsm.cfg File

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 License Type: Shareware Evaluation License
 Licensed To : Shareware End User - Distribute Freely
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 (C)1996-2009 M Squared Technologies LLC
_____

 License File: C:\Program Files (x86)\MSquared\M2 RSM\\rsm.lic
 Config. File: C:\Program Files (x86)\MSquared\M2 RSM\\rsm.cfg
 Command Line:
 Syntax: rsm.exe -option or -switch[option]
         or -switch["compound option"] filenames or wild cards
         RSM is a command line program, [ ] characters are not entered
         Example: c:\rsm\rsm.exe -c -fa -r"h,cpp,java,cs c:\proj"
         -hs Help syntax for operation
         -hf Help manual full text

         Shareware evaluation licenses process only 20 files.
         Paid licenses enable unlimited file processing.
```

Creation of CSV, XML, HTML format reports

(A.) CSV format report

Syntax for creating csv format report:

rsm -C –O"report_name.csv" -switches "file path"

```
D:\M squared Technologies>rsm -C -O"rsm_report.csv" -n C:\Users\admin\Downloads\
ui\Wolfman_UI_IAP\Src\main.c

  RSM using output file: rsm_report.csv
  Acquiring Files
(     1)
  Processing 1 Files - Status(.) 10 Files
  (100%)
  Processing Files Complete
  Reporting and Post Processing
  RSM Processed - 1 Files
```

(B.) HTML format report

Syntax for creating html format report:

rsm -H –O"report_name.htm" -switches "file path"

```
D:\M squared Technologies>rsm -H -O"rsm_report.htm" -n C:\Users\admin\Downloads\
ui\Wolfman_UI_IAP\Src\main.c

  RSM using output file: rsm_report.htm
  Acquiring Files
(     1)
  Processing 1 Files - Status(.) 10 Files
  (100%)
  Processing Files Complete
  Reporting and Post Processing
  RSM Processed - 1 Files
```

(C.) XML format report

Syntax for creating xml format report:

rsm -H –O"report_name.htm" -switches "file path"

```
D:\M squared Technologies>rsm -X -O"rsm_report.xml" -n C:\Users\admin\Downloads\
ui\Wolfman_UI_IAP\Src\main.c

  RSM using output file: rsm_report.xml
  Acquiring Files
(     1)
  Processing 1 Files - Status(.) 10 Files
  (100%)
  Processing Files Complete
  Reporting and Post Processing
  RSM Processed - 1 Files
```