An Important Understanding of Code Generation Related Concepts Using HOL - Higher Order Logic/Scala in the Context of JikesRVM - Research Virtual Machine/Jam VM for Testing Smart Devices/IoT/HPC/MongoDB in Heterogeneous Environments & Applications.

[ Exploring RVM-Research Virtual Machine Functionality on RASPBERRY PI Platforms ]

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#### [I] Inspiration + Introduction :

http://isabelle.in.tum.de/library/HOL/

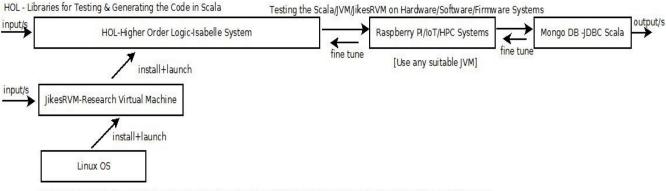
http://isabelle.in.tum.de/library/HOL/HOL-Codegenerator\_Test/index.html

http://isabelle.in.tum.de/library/HOL/HOL-MicroJava/index.html

https://alvinalexander.com/scala/scala-jdbc-connection-mysql-sql-select-example

## [II] Informatics Framework for our R&D involving Raspberry PI/IoT/HPC/Mongo DB:

A Simple Algorithm I - Testing + Generating Scala Code Using HOL-Isabelle System Approximate Algorithm to demonstrate some useful features. Testing in Progress.Please Check & Satisfy Yourselves. Our 1-35 Vixra.org based Technical NOtes utilize this type of concept/s involving cryo-EM Image Processing Thanks - Dr.Nirmal



Higher Order Logic based Informatics Platform in the Context of JikesRVM/JVM/Scala Using Raspberry PI/IoT/HPC Systems for Heterogeneous Environments.

HOL-Isabelle is little bit tricky in its usage.

Please Check before using.
[ Not a Straight Forward Method - Requires Some Fine Tuning to suit your Computational Needs ]

[ http://www.vixra.org/author/nirmal\_tej\_kumar - Please Check our cryo-EM Image Processing Algorithms ]

[ Figure I - Algorithm I - Simple Algorithm to Test the Code Generated Using HOL ]

\*\*\* We are presenting a general approach here . Requires fine tuning for Specific R&D Applications Using both JikesRVM & Jam VM to test our ideas involving the above mentioned Framework. There could be other options as well -Please Check.

## Some Useful Information on Raspberry PI/IoT/HPC/Cloud:

https://www.raspberrypi.org/help/what-is-a-raspberry-pi

https://xdk.bosch-connectivity.com && xdk.bosch-connectivity.com/cloudinfo

https://developer.bosch.com/web/xdk/cloud

https://things.eu-1.bosch-iot-suite.com/dokuwiki/doku.php?id=examples\_tutorial:xdk:start

https://www.raspberrypi.org/blog/oracle-java-on-raspberry-pi

https://dzone.com/refcardz/iot-applications-with-java-and-raspberry-pi

https://eclipsesource.com/.../oz/18/a-lightweight-java-application-server-on-raspberry-pi

https://www.oracle.com/technical-resources/articles/java/raspberrypi.html

## [III] Acknowledgment/s:

Special Thanks to all my Friends/Mentors/Collaborators. Non-Profit R&D.

# [IV] References ((((via)))) Vixra.org:

- [a] <a href="http://www.vixra.org/author/nirmal\_tej\_kumar">http://www.vixra.org/author/nirmal\_tej\_kumar</a>
- [b] <a href="http://www.vixra.org/author/d\_n\_t\_kumar">http://www.vixra.org/author/d\_n\_t\_kumar</a>
- [c] <a href="http://www.vixra.org/author/nirmal">http://www.vixra.org/author/nirmal</a>
- [d] <a href="http://www.vixra.org/author/n\_t\_kumar">http://www.vixra.org/author/n\_t\_kumar</a>
- [e] https://www.semanticscholar.org/author/Nirmal-Kumar/12354503/suggest

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