

[Monads+Parsec] based on Haskell as Mathematical Tools to Probe DNA Sequencing in the Context of [Nano-Bio] Devices/IoT/HPC R&D.

[DNA Sequencing as a ‘Physical Analogy’ of Monads. *Monad as a strategy for combining computations into more complex computations/Testing in Progress*]

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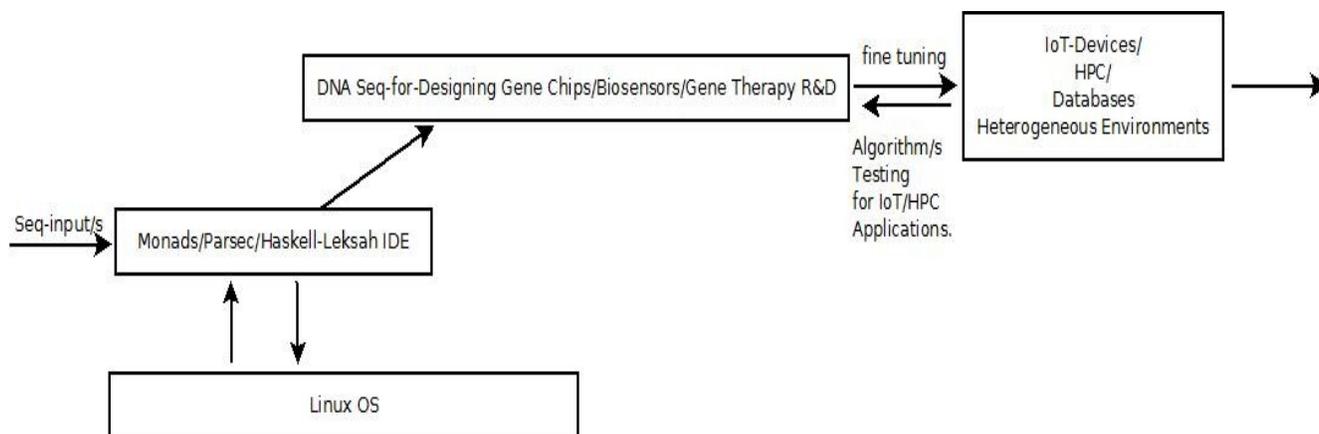
[I] Inspiration & Introduction :

“ A monad is a way to structure computations in terms of values and sequences of computations using those values. Monads allow the programmer to build up computations using sequential building blocks, which can themselves be sequences of computations. The monad determines how combined computations form a new computation and frees the programmer from having to code the combination manually each time it is required “

“Haskell provides a number of functions which are useful for working with monads in the standard libraries. The `Monad` class and most common monad functions are in the standard prelude. The `MonadPlus` class and less commonly-used (but still very useful!) functions are defined in the `Monad` module. Many other types in the Haskell libraries are declared as instances of `Monad` and `MonadPlus` in their respective modules “

[Source : https://wiki.haskell.org/All_About_Monads#An_example/<https://wiki.haskell.org/Parsec>]

[II] Haskell based Monad+DNA Sequencing R&D Informatics Framework :



Approximate Informatics Framework for our R&D of Hi-End IoT/HPC based DNA Sequencing Applications for Probing Designs of Next Generation Gene Chips/Biosensors/Gene Therapy Research Using Monads/Parsec/Haskell Please Check & Satisfy Yourself. Actual Implementation might vary to some extent. Fine Tuning is required. Thanks - Dr.Nirmal.
Also please read one of our publications on Nucleic Acid Sequencing using Higher Order Logic(HOL)
<https://www.semanticscholar.org/.../Nucleic-Acids...Sequencing.../84733fd97b20efc77a0b2aadea0f1ee65d75f08e>

[Figure I – Algorithm & Informatics Framework for Hi-End DNA Sequencing R&D]

[III] Acknowledgment/s :

Special Thanks to all WHO made this happen in my LIFE.Non-Commercial R&D/Non-Profit Academic R&D.

[IV] Related Information on Mathematical Concepts & Software Used/Useful :

[a] <https://hackage.haskell.org/package/parsec>

[b] https://wiki.haskell.org/All_About_Monads#An_example

[c] <https://www.haskell.org/>

[d] <http://x-machines.net/physicaldescription.php>

[e] <https://github.com/leksah/leksah> – Haskell IDE [or] leksah.org/

[f] hackage.haskell.org/package/leksah-server

[g] <https://wiki.haskell.org/Leksah>

[h] <https://www.semanticscholar.org/.../Nucleic-Acids...Sequencing.../84733fd97b20efc77a0b2aadea0f1ee65d75f08e>

[THE END]