

What is a linked list?

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Table of Content

History of Linked Lists	1
The Function and Benefits of Linked Lists	1
References	2
Ravikiran A S	2
Wikipedia	2
Kristian Takvam, Thaddeus Abiy, Alex Chumbley, Christopher Williams, Himanshu Sahu, Jesse Nieminen, Sun mi Kang and Jimin Khim	2
Aditya Chatterjee	2
Isaac Computer Science	2
James du Plessis	2

History of Linked Lists

Linked lists were developed in 1955–1956, by Allen Newell, although the idea of linked lists was published by Hans Peter Luhn in 1953, Cliff Shaw and Herbert A. Simon at RAND Corporation. They used it as the primary data structure for their Information Processing Language (IPL). They later on got awarded for their invention with the Turing Award in 1975. Unfortunately the patent was not filed until 2002 and then it was approved and patented by Ming-Jen Wang.

Its original purpose was as a core data structure in their IPL language for Artificial Intelligence. Through many years it has seen more usage in major programming languages like LISP. Also it could grow and shrink its size, as per the requirement, which was a great thing at the time of its invention and it didn't waste memory space, which was essential for that time, if one thinks about the capacity and the performance of the computers at that time back in the 1950's till the 2000's.

The Function and Benefits of Linked Lists

Linked lists are data structures that sequentially arrange elements of a certain type. It works like a chain where each link is connected to the next one to form a sequence with a start and an end.

Linked lists also are very modular. One can replace, add new modules, edit existing ones etc. with ease.

If one needs a list which repeats itself, doubly linked lists can be used or a circular linked list, which allows to repeat the same sequence over and over.

References

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