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Tstl proposal

This data structure library for Python is developed by Peter Andersson. The source code is from https://github.com/rgsoda/pypy-llist. It is a module for implementing various values Linkedlist based on data structure. In the following tasks, I will use Template Scripting Testing Language (TSTL) to test this Python library.

The LinkedList is a type of data structure is a single LinkedList one. In this library, it also has double LinkedList type. In my past knowledge, I chose this single LinkedList one to do this test, if I can test well, I will test another one, the double Linked List. This LinkedList can store a sequence of data values is the linked list. We can use this data structure to implement other data structure, such as Stack and Queue and so on. The feature of Linked List is that it can keep a sequence of data in discontinuous memory space. Compare to array, Array needs to use continuous memory space.

The implementation of Linked List is to record each node, and use extra pointer to point next node. It uses this method to make nodes be a sequence of node. First, I would like to test the insert function. If this function is correct, the new length of list should be the same as the previous list plus one more length.

Second, I would like to test the remove function, if this function is correct, the length of the list should be the same as our plan and the node should does not exist in this array after removing.

Third, for both appendleft and appendright functions, it means that user can add nodes from right or left sides. I would like to check the correctness and satiability.

Finally, I might build my own function to test this library. I have not decided what kind of function I want to build it yet. It depends on the following challenges I encounter.