

Team Members :-

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Name of mentoring TA :-

- Monisha Singh.

Title of the Project:-

- Implementation of STL containers like structures in C.

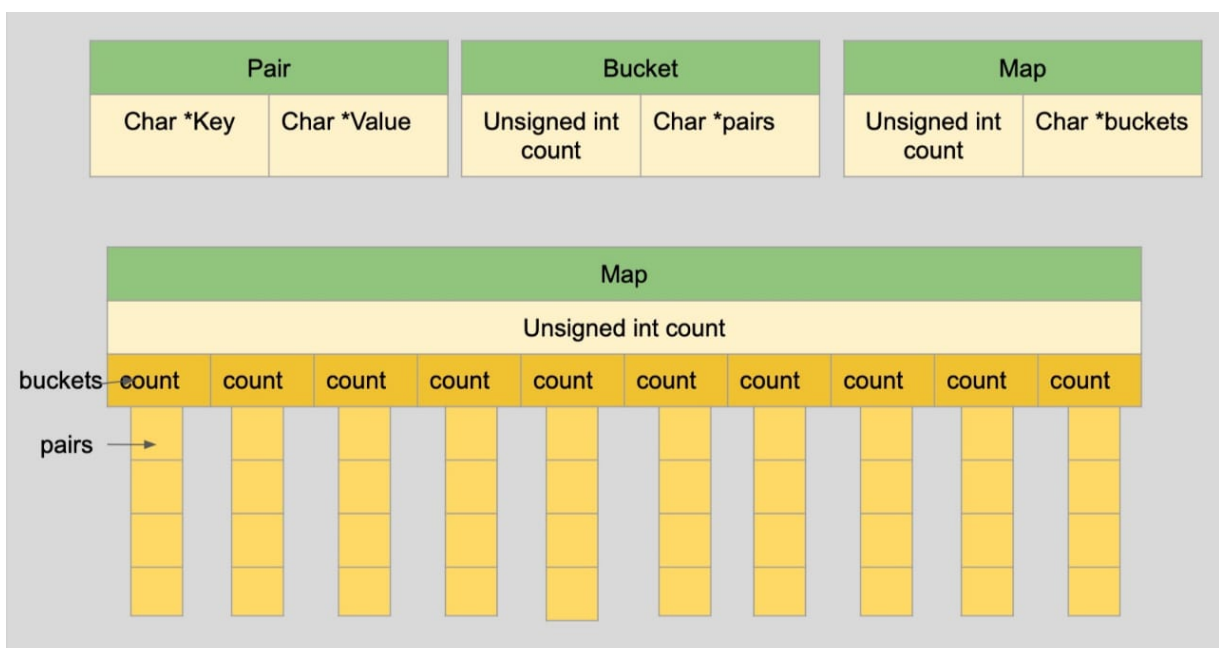
Description of the Project :-

The Standard Template Library (STL) is a set of C++ template classes to provide common programming data structures and functions such as maps, sets, vectors, etc. In this project we are trying to implement STL like containers in C. Their implementation includes memory allocation, inserting an element, searching for an element, deletion and many such operations. Further then we have done the time analysis and tried to optimise the complexities of our functions.

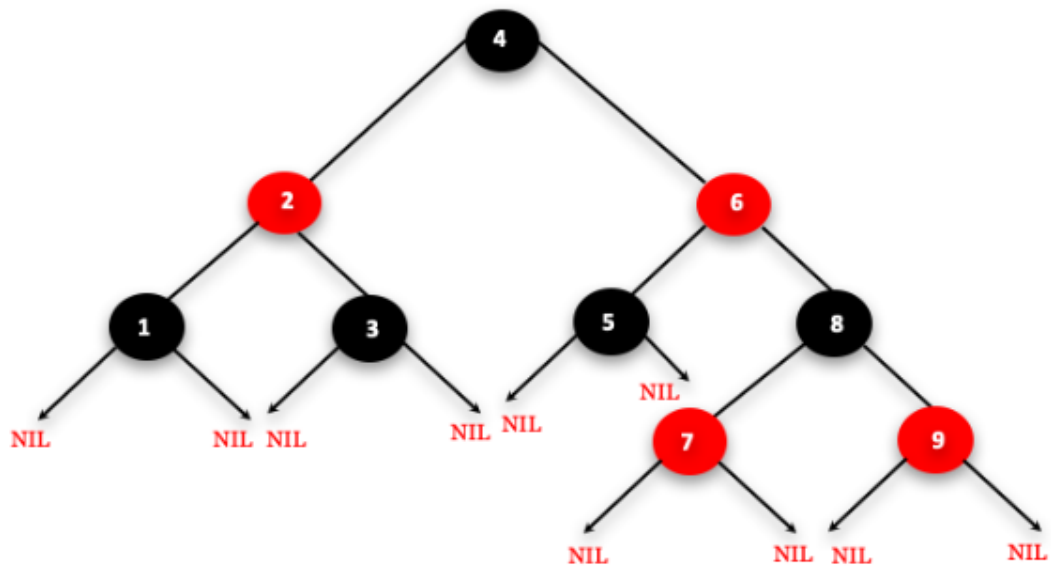
We have used simple dynamic array to store vector like structure and hash table like structure to store map like structure and red black tree to store set like structure.

The following diagram may help in understanding of the very basics of the structure involved in our project :-

- **Map Like Data Structure:-**



○ Set Like Data Structure:-



○ Vector Like Data Structure :-

