|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Type | Container | Random access | Is fast at? | Is slow at? | Based on |  |  |
| Sequnce | vector | yes | Appending/removing element at end | Insertion at middle | Dynamic array | Grows on only backend |  |
| deque |  | Appending/removing element at **beginning**/end | Insertion at middle | Dynamic array | Grows on both ends |  |
| arrays | yes |  |  | Static/ fixed size of array |  | Cannot changes its size |
| List | No | Insertion/removal of element at **any location** is fast.  Moving an element at middle is also very fast.  Just change the links of next and previous. |  | Doubly link list |  |  |
| Forward\_list | No |  |  | Singly link list |  | No backward movememt,  To delete /add an element must be know the preceding position. |
| Associative | Set |  |  |  | Binary tree |  |  |
| Multiset |  |  |  | Binary tree |  |  |
| Map |  |  |  | Binary tree |  |  |
| Multimap |  |  |  | Binary tree |  |  |