## Page 86 Vectors STENSHINGERD 3 duod

Vectors

A vector in C++ is a dynamic array that can grow or shrink in size, making it a versatile and officient datastructure for storing and manipulating sequences of elements.

Static Memory Allocation

Norman Array Moder int arr [5]

Dynamic Memory Allocation

int \* arr = new int [h]

Note:

array and dynamic malloc array has limitations with the size.

In vector, it manages by its own if any extra storage is require

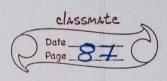
1/ector

Declaration vector < int > V;

Insertion

V. push\_back (1); V. push-back (2);

00 1 asser [++] asser [h--] ) )



Size

int size = Visize();

In vector, capacity increases by double when it gets filled.

To remove V. pop-back()

To Access V. atci) OR V[i]

To clear

Vector Initialization Techniques

Vector 2int > arr; Vector 2int > arr 2 (5,-1); Vector 2int > arr 3= (1,2,3,4,5); Vector 2int > arr 4 (1,2,3,4,5); Vector 2int > arr 5 = (1,2,3,4,5); Vector 2int > arr 6 (arr 5); Print (arr 6);

Front & back Element

V. Front() V. back()

