

- Class, Constructor, Destructor :

Your task is to implement a Queue. (Your queue will contain characters.)

- Private members:

- **array** : A pointer to the array of queue elements.
 - **head** : An integer that contains the index of the first queue element..
 - **tail** : An integer that contains the index of the last queue element.
 - **capacity** : An integer that contains the maximum capacity of the queue. In other words the length of the array.

- Public member functions:

- Write a **constructor** with no parameter.
 - It will initialize **array** pointer so that the pointer points to an array and set the **capacity** equal to the size. (Use constant size, say 10).
 - **void enqueue(char c)**
 - This function will put the character in c, at the end of the queue.
 - **void dequeue()**
 - This function will remove the character at the front of the queue. (Adjust the head as needed.)
 - **char front()**
 - This function will return the character at the front of the queue.

- Function Overloading:

- Overload **constructor**.

- **Queue(int n)**
 - It will initialize **array** pointer so that the pointer points to an array of size n and set the **capacity** to n.
 - **Queue(char *p)**
 - Character pointer **p** points to a string of length **len**. Initialize **array** pointer so that the pointer points to an array of size **len*2** and set the **capacity** equal to the **len*2**. Then **enqueue** each character in the string pointer by **p**.

- Overload **enqueue** function.

- **void enqueue(char *p)**
 - Character pointer **p** points to a string. **enqueue** all the characters in the string pointed by **p**.

- Overload the **front** function

- **char front(int pos)**
 - It will return the character **pos** element away from the head.