Queue using Linked List

Shiv Shankar Dayal

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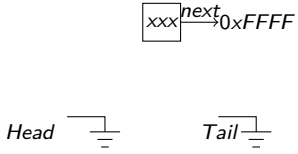
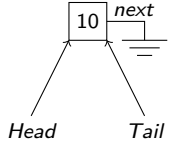
Enqueue when Head and Tail are NULL

Enqueue operation when both head and tail are `NULL`. First we malloc a node temp which is having grabage data and pointer pointing to a not so useful location. Let us say we want to enqueue data 10.



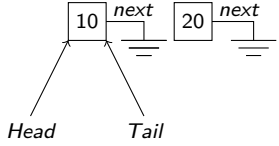
Enqueue when Head and Tail are NULL

We set the data in allocated node and set `next` to `NULL`. Then make head and tail both point to it.



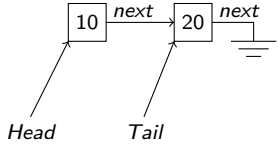
Enqueue when Head and Tail are not NULL

Let us say we want to enqueue 20. We allocate a new node set the data in allocated node and set `next` to `NULL`.



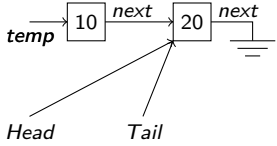
Enqueue when Head and Tail are not NULL

Now we point `next` of `tail` to this new allocated item and set `tail` to point to it.



When head is not euqal to tail

We copy data of `head`. Copy head to a temporary pointer `temp`. Then set `head` to point to next node and free from the temporary pointer `temp`. The we free `temp`. The order is important.



When head is euqal to tail

We copy data of `head`. Copy head to a temporary pointer `temp`. Then set `head` and `tail` to `NULL` The we free `temp`. The order is important.