COMSATS UNIVERSITY ISLAMABAD, ATTOCK CAMPUS.

Assignment 01

Course:

Data Structure

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Date of submission:

05-Mar-2025

Visual representation :-

In code we perform some key operations : adding a task, removing the highest priority task, and removing task by his ID.

Below the visual representation of each operation.

(i) Adding a task :

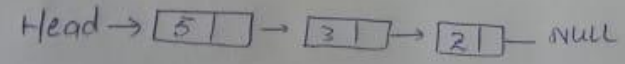
To add a task the following steps followed.

(i) If the list is empty or the new task has the highest priority, than it become the new head.

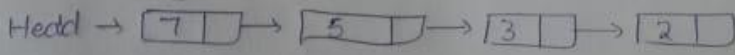
(ii) Otherwise, triverse the list to find correct position and insert task.

Visual repository :

Before Adding :



After Adding 7 :



(ii) Removing the high priority task:

High priority task is always at the head of list. Remove it involves updating the head to the next task.

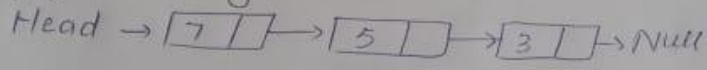
These steps followed by:

(i) Check if the list is empty.

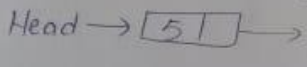
(ii) If not, remove the head and update the head to the next task.

Visual Repository :

Before Removing:



After Removing high priority task.



(iii) Removing by task Id:

A task is removed by searching for its ID in the linked list.

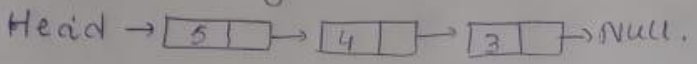
Step followed:

(i) If the head from head, than update the head.

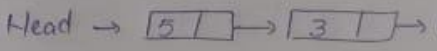
(ii) Other wise traverse the list to find the task and adjust the pointers to bypass it.

Visual representation:

Before removing.



After removing:



(iv) **View all task in list:**

This operation simply traverse the linked list and print the detail of each task.

Visual representation:

Here simply output of code.
for example

Output:

Id: 1, Desc: Task 1, priority 5.
Id: 2, Desc: Task 2, priority 4.