***DAY 3 ASSIGNMENT***

***Question 1 :***

***Write a function “insert\_any()” for inserting a node at any given position of the linked list. Assume position starts at 0.***

***Question 2 :***

***Write a function “delete\_beg()” for deleting a node from the beginning of the linked list.***

***Question 3:***

***Write a function “delete\_end()” for deleting a node from the end of the linked list.***

***ANSWER:***

**1.**

*#include<stdio.h>*

*typedef struct node*

*{*

*int data;*

*struct node \*next;*

*}node;*

*node \*create(int data);*

*node \*insert(node \*head,int pos,int data);*

*void display(node \*head);*

*int main()*

*{*

*node \*head = NULL;*

*head = insert(head, 1,10);*

*head = insert(head, 2,20);*

*display(head);*

*head = insert(head,2 ,15);*

*display(head);*

*}*

*node \*create(int data)*

*{*

*node \*new = (node \*)malloc(sizeof(node));*

*new -> data = data;*

*new -> next = NULL;*

*return new;*

*}*

*node \*insert(node \*head,int pos,int data)*

*{*

*int i;*

*node \*new = create(data);*

*new -> next = NULL;*

*if (pos==1)*

*{*

*new -> next = head;*

*head = new;*

*return head;*

*}*

*else*

*{*

*node \*temp=head;*

*for(i=0;i<pos-2;i++)*

*{*

*temp = temp -> next;*

*}*

*new -> next = temp -> next;*

*temp -> next = new;*

*}*

*return head;*

*}*

*void display(node \*head)*

*{*

*if(!head)*

*{*

*printf("No node to display\n");*

*return;*

*}*

*node \*temp = head;*

*while(temp)*

*{*

*printf("|%d| -> ", temp -> data);*

*temp = temp -> next;*

*}*

*printf("N\n");*

*}*

*2.*

*#include<stdio.h>*

*typedef struct node*

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*int data;*

*struct node \*next;*

*}node;*

*node \*create(int data);*

*void delbeg();*

*void display(node \*head);*

*node \*insert(node \*head,int pos,int data);*

*int main()*

*{*

*node \*head = NULL;*

*head = insert(head, 1,10);*

*head = insert(head, 2,20);*

*head = insert(head,2 ,15);*

*display(head);*

*delbeg();*

*display(head);*

*}*

*node \*create(int data)*

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*node \*new = (node \*)malloc(sizeof(node));*

*new -> data = data;*

*new -> next = NULL;*

*return new;*

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*node \*insert(node \*head,int pos,int data)*

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*int i;*

*node \*new = create(data);*

*new -> next = NULL;*

*if (pos==1)*

*{*

*new -> next = head;*

*head = new;*

*return head;*

*}*

*else*

*{*

*node \*temp=head;*

*for(i=0;i<pos-2;i++)*

*{*

*temp = temp -> next;*

*}*

*new -> next = temp -> next;*

*temp -> next = new;*

*}*

*return head;*

*}*

*void delbeg()*

*{*

*node \*new=head;*

*head=new -> next;*

*free(new);*

*}*

*void display(node \*head)*

*{*

*if(!head)*

*{*

*printf("No node to display\n");*

*return;*

*}*

*node \*temp = head;*

*while(temp)*

*{*

*printf("|%d| -> ", temp -> data);*

*temp = temp -> next;*

*}*

*printf("N\n");*

*}*

*3.*

*#include<stdio.h>*

*typedef struct node*

*{*

*int data;*

*struct node \*next;*

*}node;*

*node \*create(int data);*

*void delend();*

*void display(node \*head);*

*node \*insert(node \*head,int pos,int data);*

*int main()*

*{*

*node \*head = NULL;*

*head = insert(head, 1,10);*

*head = insert(head, 2,20);*

*head = insert(head,2 ,15);*

*display(head);*

*delend();*

*display(head);*

*}*

*node \*create(int data)*

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*node \*new = (node \*)malloc(sizeof(node));*

*new -> data = data;*

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*node \*insert(node \*head,int pos,int data)*

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*int i;*

*node \*new = create(data);*

*new -> next = NULL;*

*if (pos==1)*

*{*

*new -> next = head;*

*head = new;*

*return;*

*}*

*else*

*{*

*node \*temp=head;*

*for(i=0;i<pos-2;i++)*

*{*

*temp = temp -> next;*

*}*

*new -> next = temp -> next;*

*temp -> next = new;*

*}*

*}*

*void delend()*

*{*

*node \*temp=head;*

*while(temp->next != NULL)*

*{*

*temp = temp -> next;*

*}*

*free(temp);*

*}*

*void display(node \*head)*

*{*

*if(!head)*

*{*

*printf("No node to display\n");*

*return;*

*}*

*node \*temp = head;*

*while(temp)*

*{*

*printf("|%d| -> ", temp -> data);*

*temp = temp -> next;*

*}*

*printf("N\n");*

*}*