LetsUpgrade

Assignment of Day-3 26th December 2020

Question 1

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

position starts at 0.

Ans:-

void insert\_any(int data , int position){

struct node\* ptr=(struct node\*)malloc(sizeof(struct node));

ptr->data = data;

int i;

struct node\* temp = head;

if(position == 1){

ptr->next = temp;

head= ptr;

return;

}

for(i=1;i<position-1;i++){

temp = temp->next;

}

ptr->next = temp->next;//newly created node point top next node of ptr temp

temp->next = ptr;

}

Question 2

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

Ans:-

void delete\_beg(){

struct node\* to\_delete;

if(head == NULL){

printf(“List is already full”);

}

else{

to\_delete = head;

head =head->next;

printf(“%d\n deleted data”, to\_delete);

free(to\_delete);

printf(“Successfully deleted”);

}

}

Question 3

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

Ans:-

void delete\_end() {

struct node \*toDelete, \*secondLastNode;

if(head == NULL){

printf("List is already empty.");

}

else{

toDelete = head; secondLastNode = head;

/\* Traverse to the last node of the list \*/

while(toDelete->next != NULL){

secondLastNode = toDelete;

toDelete = toDelete->next;

}

if(toDelete == head) {

head = NULL;

}

else{

// Disconnect link of second last node with last

node

secondLastNode->next = NULL;

}

/\* Delete the last node using free function\*/

free(toDelete);

printf("SUCCESSFULLY DELETED LAST NODE OF LIST\n");

}

}