**Linked List Assignment**



Session: 2021 – 2024

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**Linked Link Code**

**Class Node:**

Class Node

{

public :

int data;

Node \*next;

public :

Node(int value){

data=value;

next=NULL;

}

};

**Class LinkedList:**

private:

Node\* Head;

public :

linkList(){

Head=NULL;

}

**Print Function:**

void printList()

{

//Node \*temp= Head;

Node\* n=Head;

while(n!=NULL)

{

cout<< n->data <<" ";

n=n->next;

}

}

**Insert Function:**

bool insert(int key,int location)

{

Node\* n =new Node(key);

if (location==Head->data)

{

n->next=Head->next;

Head->next=n;

return 1;

}

Node\* temp=Head;

while(temp->data!=location){

temp=temp->next;

if (temp==NULL){

return 1;

}

}

n->next=temp->next;

temp->next=n;

}

**Insert Head Function:**

bool insertHead(int key)

{

Node\* n =new Node(key);

n->next=Head;

Head=n;

}

**Insert Tail Function:**

bool insertTail(int key){

Node\* n =new Node(key);

if (Head==NULL)

{

Head=n;

return 1;

}

Node\* temp=Head;

while (temp->next!=NULL){

temp=temp->next;

}

temp->next=n;

}

**Delete Function:**

bool Delete(int key)

{

Node\* temp=Head;

Node\* prev=NULL;

if (temp!=NULL && temp->data==key){

Head=temp->next;

delete temp;

return 1;

}

else{

while(temp!=NULL && temp->data!=key){

prev=temp;

temp=temp->next;

}

if (temp==NULL){

return 1;

}

prev->next=temp->next;

delete temp;

}

}

**Main Function:**

main()

{

LinkedList L;

L.insertHead(5);

L.insertHead(10);

L.insert(2,10);

L.insertTail(20);

L.insertHead(1);

L.Delete(20);

L.Delete(10);

L.printList();

}