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BATCH: B-1

LINKED LIST

CODE 1:

#include <stdio.h>

#include <stdlib.h>

struct node

{

int data;

struct node\*next;

};

struct node\* insert(struct node \*s,int ele) //pass by value

{

struct node \*temp,\*p;

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

temp -> data=ele;

temp -> next=NULL;

if(s==NULL)

{

s=temp;

}

else

{

p=s;

while(p ->next !=NULL )

{

p=p->next;

}

p -> next=temp;

}

return s;

}

void display(struct node \*s)

{

struct node\*p;

if(s==NULL)

{

printf("List is empty");

}

else

{

p=s;

while(p!=NULL )

{

printf("%d->", p->data);

p=p->next;

}

printf("NULL");

}

}

void main()

{

struct node \*start=NULL; // Null/Empty set

int n;

printf("Enter the number of terms for the linked list:");

scanf("%d",&n);

for(int i=0;i<n;i++)

{

int n1;

printf("Enter the number for the linked list:");

scanf("%d",&n1);

start=insert(start,n1);

}

display(start);

}

CODE 2:

#include <stdio.h>

#include <stdlib.h>

struct node

{

int data;

struct node\*next;

};

struct node\* insert(struct node \*s,int ele) //pass by value

{

struct node \*temp,\*p;

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

temp -> data=ele;

temp -> next=NULL;

if(s==NULL)

{

s=temp;

}

else

{

p=s;

while(p ->next !=NULL )

{

p=p->next;

}

p -> next=temp;

}

return s;

}

void display(struct node \*s)

{

struct node\*p;

if(s==NULL)

{

printf("List is empty");

}

else

{

int count=0;

p=s;

printf("The odd position elements in linked list:");

while(p!=NULL )

{

if(count%2!=0)

{

printf("%d->", p->data);

}

p=p->next;

count++;

}

printf("NULL");

}

}

void main()

{

struct node \*start=NULL; // Null/Empty set

int n;

printf("Enter the number of terms for the linked list:");

scanf("%d",&n);

for(int i=0;i<n;i++)

{

int n1;

printf("Enter the number for the linked list:");

scanf("%d",&n1);

start=insert(start,n1);

}

display(start);

}

CODE 3:

#include <stdio.h>

#include <stdlib.h>

struct node

{

int data;

struct node\*next;

};

struct node\* insert(struct node \*s,int ele) //pass by value

{

struct node \*temp,\*p;

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

temp -> data=ele;

temp -> next=NULL;

if(s==NULL)

{

s=temp;

}

else

{

p=s;

while(p ->next !=NULL )

{

p=p->next;

}

p -> next=temp;

}

return s;

}

void display(struct node \*s)

{

struct node\*p;

if(s==NULL)

{

printf("List is empty");

}

else

{

p=s;

printf("The even elemnts in linked list:\n");

while(p!=NULL )

{

if(p->data % 2==0)

{

printf("%d->", p->data);

}

p=p->next;

}

printf("NULL");

}

}

void main()

{

struct node \*start=NULL; // Null/Empty set

int n;

printf("Enter the number of terms for the linked list:");

for(int i=0;i<n;i++)

{

int n1;

printf("Enter the number for the linked list:");

scanf("%d",&n1);

start=insert(start,n1);

}

display(start);

CODE 4:

#include <stdio.h>

#include <stdlib.h>

struct node

{

int data;

struct node\*next;

};

struct node\* insert(struct node \*s,int ele) //pass by value

{

struct node \*temp,\*p;

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

temp -> data=ele;

temp -> next=NULL;

if(s==NULL)

{

s=temp;

}

else

{

p=s;

while(p ->next !=NULL )

{

p=p->next;

}

p -> next=temp;

}

return s;

}

void display(struct node \*s)

{

struct node\*p;

if(s==NULL)

{

printf("List is empty");

}

else

{

p=s;

printf("The odd elemnts in linked list:\n");

while(p!=NULL )

{

if(p->data % 2!=0)

{

printf("%d->", p->data);

}

p=p->next;

}

printf("NULL");

}

}

void main()

{

struct node \*start=NULL; // Null/Empty set

int n;

printf("Enter the number of terms for the linked list:");

scanf("%d",&n);

for(int i=0;i<n;i++)

{

int n1;

printf("Enter the number for the linked list:");

scanf("%d",&n1);

start=insert(start,n1);

}

display(start);

}