Program for Detect the loop or cycle in Linked List:

#include <stdio.h>

#include <stdlib.h>

struct node

{

int data;

struct node \*next;

};

struct node \*getnode(int data)

{

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

temp->data=data;

temp->next=NULL;

return temp;

}

void print(struct node \*head)

{

struct node \*current=head;

while(current!=NULL)

{

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

current=current->next;

}

}

int hasCycle(struct node \*head) {

struct node\* slow=head;

struct node \*fast=head;

while(slow!=NULL && fast!=NULL && fast->next!=NULL)

{

slow=slow->next;

fast=fast->next->next;

if(slow==fast)

{

printf("found loop");

return 1;

}

}

printf("no loop");

return 0;

}

int main() {

struct node \*head=getnode(1);

head->next=getnode(4);

head->next->next=getnode(3);

head->next->next->next=getnode(1);

head->next->next->next->next=getnode(5);

//print(head);

hasCycle(head);

return 0;

}