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**Class Assignment**

**Program 1**

**Question:**

WAP to display the contents of a Single Linked List in reversed order.

**Code:**

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include <math.h>

#include <stdint.h>

#include <stdbool.h>

//all packages are imported now

typedef struct node

{

int data;

struct node \*next;

}\*NODE;

//we made the structure

NODE create(NODE start)

{

//this method creates a new node

NODE new\_node;

int data;

printf("\nEnter the data. If entered -1, list is complete \n");

scanf("%d",&data);

while(data!=-1)

{

NODE new\_node;

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

//node created for main list

new\_node->data=data;

if(start==NULL)

{

start=new\_node;

new\_node->next=NULL;

}

else

{

NODE ptr=start;

while(ptr->next!=NULL)

{

ptr=ptr->next;

}

ptr->next=new\_node;

new\_node->next=NULL;

}

printf("\nEnter the data. If entered -1, list is complete \n");

scanf("%d",&data);

}

return start;

}

//end of creating node method

void display(NODE start)

{

//this method displays the list

NODE last=NULL;

printf("\nThe List in reverse order:\n");

while(last!=start)

{

NODE ptr=start;

while(ptr->next!=last)

{

ptr=ptr->next;

}

printf("%d\n",ptr->data);

last=ptr;

}

//list is displayed

printf("\n");

}

//end of diaplay method

int main()

{

//this is the main execution method which controls the flow of execution

NODE start=NULL;

//main execution function

start=create(start);

display(start);

return 0;

}

//end of main method

**Output:**

