Institute of Computer Technology
B. Tech. Computer Science and Engineering
Sub: DS Branch: BDA Class: A

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Sem: 3
Class: A
Subject: DS
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Write a program in C to create and display a Singly Linked List.

Test Data :
Input the number of nodes : 3
Input data for node 1 : 5
Input data for node 2 : 6
Input data for node 3 : 7

Expected Output :
Data entered in the list :
Data = 5
Data = 6
Data = 7

```c
#include <stdio.h>
#include <stdlib.h>

struct Node
{
    int data;
    struct Node *next;
};

int main()
{
    int n, data;
    struct Node *head = NULL, *temp = NULL, *newNode = NULL;

    printf("Input the number of nodes: ");
    scanf("%d", &n);

    for (int i = 0; i < n; i++)
    {
        newNode = (struct Node *)malloc(sizeof(struct Node));
        printf("Input data for node %d: ", i + 1);
        scanf("%d", &newNode->data);
        newNode->next = NULL;

        if (head == NULL)
        {
            head = newNode;
        }
        else
        {
            temp->next = newNode;
        }
        temp = newNode;
    }

    printf("Data entered in the list:\n");
    temp = head;
    while (temp)
    {
        printf("Data = %d\n", temp->data);
        temp = temp->next;
    }

    return 0;
}
```

Output:

```
PS C:\Users\jatin\OneDrive\Desktop\Academics\SEM - 3\Practicals\DS\Practical-8> ./a.exe
Input the number of nodes: 5
Input data for node 1: 7
Input data for node 2: 2
Input data for node 3: 4
Input data for node 4: 8
Input data for node 5:
1
Data entered in the list:
Data = 7
Data = 2
Data = 4
Data = 8
Data = 1
PS C:\Users\jatin\OneDrive\Desktop\Academics\SEM - 3\Practicals\DS\Practical-8>
```