

Prgm no : 4

Prgm to implement singly linked list.

Prgm

```

5 #include <stdio.h>
6 #include <stdlib.h>
7
8 struct node
9 {
10     int data;
11     struct node *link;
12 };
13
14 void createnode(int data)
15 {
16     struct node *temp = (struct node *) malloc(sizeof
17     struct node));
18     temp->data = data;
19     temp->link = NULL;
20     return temp;
21 }
22
23 void insertnode(int data)
24 {
25     if (head == NULL)
26     {
27         head = createnode(data);
28     }

```

else

{

struct node \*temp = head;

while (temp → link != NULL)

{

temp = temp → link;

}

temp = temp → link;

}

10 newnode = createnode (data);

temp → link = newnode;

{

{ (link tail) insertion in above function

struct node \* search (int data)

15 { (n) (n short func) question above function

struct node \*temp = head;

while (temp != NULL)

{

if (temp → data == data)

{

return temp;

}

temp = temp → link;

{

25 return NULL;

void }

```
void printlinkedlist()
{
    struct node *demp = head;
    int i = 1;
    5 while (demp != NULL)
    {
        printf ("In node %d : %d", i, demp->data);
        demp = demp->link;
        i++;
    }
    10
    {
        int main()
        {
            int n, i, data, x;
            15 printf ("In enter the number of nodes : ");
            scanf ("%d", &n);
            i = 0;
            while (i < n)
            {
                printf ("In enter the %d node : ", i + 1);
                scanf ("%d", &data);
                insertnode (data);
                i++;
            }
            20 printlinkedlist();
            return (0);
        }
    }
```

Output:-

Enter the number of node : 3

Enter the 1 node : 2

Enter the 2 node : 4

Enter the 3 mode : 7

node 1 : 2

node 2 : 4

node 3 : 7

DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: TC

C:\TURBOC3\BIN>TC

enter the nmbr of nodes:3

enter the 1 node:2

enter the 2 node:4

enter the 3 node:7

node 1: 2

node 2: 4

node 3: 7

enter the nmbr of nodes: