**Singly Linked List**

**Algorithm**

STEP 1: SET PTR = HEAD

STEP 2: IF PTR = NULL

WRITE "EMPTY LIST"

GOTO STEP 7

END OF IF

STEP 4: REPEAT STEP 5 AND 6 UNTIL PTR! = NULL

STEP 5: PRINT PTR→ DATA

STEP 6: PTR = PTR → NEXT

[END OF LOOP]

STEP 7: EXIT

**Program**

#include<stdio.h>

#include<stdlib.h>

void create(int);

void traverse();

struct node

{

int data;

struct node \*next;

};

struct node \*head;

void main ()

{

int choice,item;

do

{

printf("\n1.Append List\n2.Traverse\n3.Exit\n4.Enter your choice?");

scanf("%d",&choice);

switch(choice)

{

case 1:

printf("\nEnter the item\n");

scanf("%d",&item);

create(item);

break;

case 2:

traverse();

break;

case 3:

exit(0);

break;

default:

printf("\nPlease enter valid choice\n");

}

}while(choice != 3);

}

void create(int item)

{

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

if(ptr == NULL)

{

printf("\nOVERFLOW\n");

}

else

{

ptr->data = item;

ptr->next = head;

head = ptr;

printf("\nNode inserted\n");

}

}

void traverse()

{

struct node \*ptr;

ptr = head;

if(ptr == NULL)

{

printf("Empty list..");

}

else

{

printf("printing values . . . . .\n");

while (ptr!=NULL)

{

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

ptr = ptr -> next;

}

}

}