**Experiment-36:With linked allocation, each file is a linked list of disk blocks; the disk blocks may be scattered anywhere on the disk. The directory contains a pointer to the first and last blocks of the file. Each block contains a pointer to the next block. Design a C program to simulate the file allocation strategy.**

**Aim:**  
To simulate the linked allocation file strategy where each file is represented as a linked list of disk blocks, with each block containing a pointer to the next block. The directory contains pointers to the first and last blocks of the file.

**Procedure:**

1. Take the number of blocks in the file as input.
2. Store the file blocks using linked list nodes, where each node contains data and a pointer to the next block.
3. The directory will store pointers to the first and last blocks.
4. Access and print the blocks sequentially by following the links.

**C Program:**

#include <stdio.h>

#include <stdlib.h>

struct Block {

int data;

struct Block\* next;

};

int main() {

int n;

printf("Enter the number of blocks in the file: ");

scanf("%d", &n);

struct Block\* head = NULL;

struct Block\* tail = NULL;

struct Block\* temp;

for (int i = 0; i < n; i++) {

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

printf("Enter data for block %d: ", i + 1);

scanf("%d", &temp->data);

temp->next = NULL;

if (head == NULL) {

head = temp;

tail = temp;

} else {

tail->next = temp;

tail = temp;

}

}

printf("File blocks:\n");

struct Block\* current = head;

while (current != NULL) {

printf("Block data: %d\n", current->data);

current = current->next;

}

return 0;

}

Output:

