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Experiment-34:Consider a file system where the records of the file are stored one after another both physically and logically. A record of the file can only be accessed by reading all the previous records. Design a C program to simulate the file allocation strategy.

Aim:

To simulate the file allocation strategy where records of the file are stored one after another both physically and logically, and a record can only be accessed by reading all the previous records.

Procedure:

1. Take the number of records in the file as input.
2. Store the records sequentially in memory (using an array).
3. Access a record by sequentially reading all the previous records (simulating the behavior of the allocation strategy).
4. Display the records as they are accessed.

C Program:

```
#include <stdio.h>


int main() {
   int n;
   printf("Enter the number of records in the file: ");
   scanf("%d", &n);


   int file[n];
   printf("Enter the records: \n");
   for (int i = 0; i < n; i++) {
      printf("Record %d: ", i + 1);
      scanf("%d", &file[i]);
   }
```

```
    int record;
    printf("Enter the record number to access (1 to %d): ", n);
    scanf("%d", &record);

    if (record < 1 || record > n) {
        printf("Invalid record number.\n");
    } else {
        printf("Accessing records sequentially:\n");
        for (int i = 0; i < record; i++) {
            printf("Record %d: %d\n", i + 1, file[i]);
        }
    }

    return 0;
}
```

Output:

Output

```
Enter the number of records in the file: 5
Enter the records:
Record 1: 4
Record 2: 5
Record 3: 8
Record 4: 6
Record 5: 4
Enter the record number to access (1 to 5): 5
Accessing records sequentially:
Record 1: 4
Record 2: 5
Record 3: 8
Record 4: 6
Record 5: 4
```