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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 a file allocation strategy where records of the file are stored sequentially and can be accessed only by reading all the previous records.

## ALGORITHM:-

1. Define a file as a sequence of records, stored one after another, where each record can only be accessed after reading the previous ones.
2. Each record will be represented by an integer or string, and the records will be stored in an array.
3. Create a function to read and access the file record by record.
4. Display the content of the file sequentially.

## PROCEDURE:-

1. Initialize the file as an array of records.
2. Implement a function to simulate accessing the file, one record at a time.
3. Read the records sequentially and display the contents.

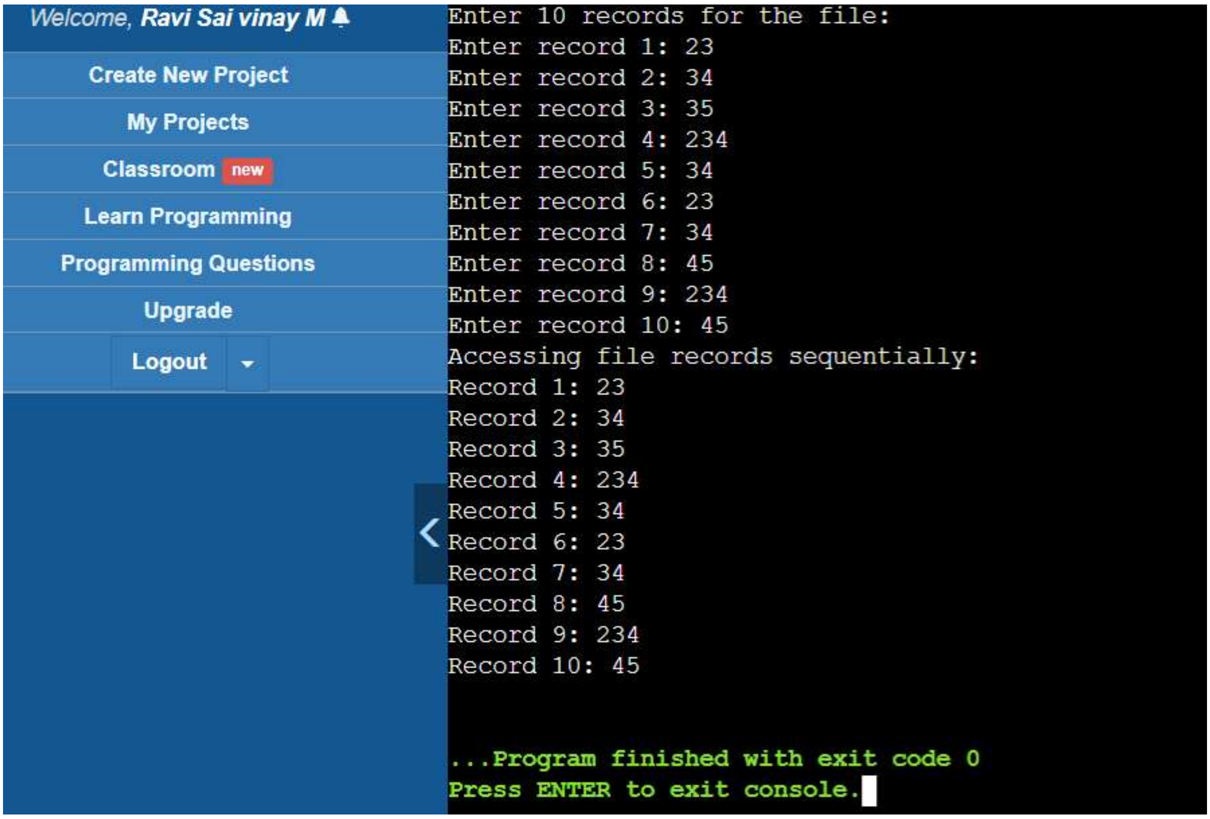
## CODE:-

```
#include <stdio.h>

#include <stdlib.h>
```

```
#define MAX_RECORDS 10  // Maximum number of records in the file

// Function to simulate file allocation strategy
void accessFileRecords(int file[]) {
    printf("Accessing file records sequentially:\n");
    for (int i = 0; i < MAX_RECORDS; i++) {
        printf("Record %d: %d\n", i + 1, file[i]);
    }
}

int main() {
    int file[MAX_RECORDS];

    // Simulate a file with records stored sequentially
    printf("Enter %d records for the file:\n", MAX_RECORDS);
    for (int i = 0; i < MAX_RECORDS; i++) {
        printf("Enter record %d: ", i + 1);
        scanf("%d", &file[i]);
    }

    // Access and display the file records
    accessFileRecords(file);

    return 0;
```

}

## OUTPUT:-



```
Enter 10 records for the file:
Enter record 1: 23
Enter record 2: 34
Enter record 3: 35
Enter record 4: 234
Enter record 5: 34
Enter record 6: 23
Enter record 7: 34
Enter record 8: 45
Enter record 9: 234
Enter record 10: 45
Accessing file records sequentially:
Record 1: 23
Record 2: 34
Record 3: 35
Record 4: 234
Record 5: 34
Record 6: 23
Record 7: 34
Record 8: 45
Record 9: 234
Record 10: 45


...Program finished with exit code 0
Press ENTER to exit console.
```

## RESULT:-

The program simulates a file allocation strategy where the records are stored sequentially. The program reads and displays each record one by one, accessing the records in the order they were stored. This simulates a **sequential access** file system, where each record can only be accessed after reading all previous records.