

## Write a c program to stimulate the following file allocation strategies

a) sequential

b) indexed

c) linked

```
#include <stdio.h>

#include <stdlib.h>

#define MAX_BLOCKS 10

void sequentialAllocation(int blocks[], int total) {
printf("Sequential: ");   for (int i = 0; i < total; i++)
printf("%d -> ", blocks[i]);   printf("End\n");
}

void indexedAllocation(int index, int blocks[], int total)
{   printf("Indexed: Index Block %d -> [ ", index);
for (int i = 0; i < total; i++) printf("%d ", blocks[i]);
printf("]\n");
}

void linkedAllocation(int blocks[], int total) {
printf("Linked: ");   for (int i = 0; i < total; i++)
printf("%d -> ", blocks[i]);   printf("End\n");
}

int main() {   int blocks[MAX_BLOCKS], total,
choice, indexBlock;

printf("Enter number of blocks (<=10): ");

scanf("%d", &total);   printf("Enter block numbers: ");   for (int
i = 0; i < total; i++) scanf("%d", &blocks[i]);   printf("Choose
```

```
allocation: 1. Sequential 2. Indexed 3. Linked\n");    scanf("%d",
&choice);
```

```
    if (choice == 2) {        printf("Enter
index block number: ");    scanf("%d",
&indexBlock);
    }
```

```
    if (choice == 1) sequentialAllocation(blocks, total);    else if
(choice == 2) indexedAllocation(indexBlock, blocks, total);    else
if (choice == 3) linkedAllocation(blocks, total);    else
printf("Invalid choice!\n");
```

```
    return 0;
}
```

## OUTPUT:

```
Enter number of blocks (<=10): 6
Enter block numbers: 4
3
2
1
3
0
Choose allocation: 1. Sequential 2. Indexed 3. Linked
1
Sequential: 4 -> 3 -> 2 -> 1 -> 3 -> 0 -> End
```