#include <stdio.h>

#include <conio.h>

#include <stdlib.h>

int files[50], indexBlock[50], indBlock, n;

void recurse1();

void recurse2();

void recurse1(){

printf("Enter the index block: ");

scanf("%d", &indBlock);

if (files[indBlock] != 1){

printf("Enter the number of blocks and the number of files needed for the index %d on the disk: ", indBlock);

scanf("%d", &n);

}

else{

printf("%d is already allocated\n", indBlock);

recurse1();

}

recurse2();

}

void recurse2(){

int ch;

int flag = 0;

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

scanf("%d", &indexBlock[i]);

if (files[indexBlock[i]] == 0)

flag++;

}

if (flag == n){

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

files[indexBlock[j]] = 1;

}

printf("Allocated\n");

printf("File Indexed\n");

for (int k=0; k<n; k++)

{

printf("%d ------> %d : %d\n", indBlock, indexBlock[k], files[indexBlock[k]]);

}

}

else{

printf("File in the index is already allocated\n");

printf("Enter another indexed file\n");

recurse2();

}

printf("Do you want to enter more files?\n");

printf("Enter 1 for Yes, Enter 0 for No: ");

scanf("%d", &ch);

if (ch == 1)

recurse1();

else

exit(0);

return;

}

int main()

{

for(int i=0;i<50;i++)

files[i]=0;

recurse1();

return 0;

}

OUTPUT:

