NAME: MUHAMMAD SAIM NOMANI
ROLL NO: DT-22030
SUBJECT: OPERATING SYSTEM
CODE: CT-353
DATA SCIENCE
THIRD YEAR

OS LAB: 10

CODE:

```
#include <stdio.h>
#include <conio.h>

int main() {
    int ms, ps, nop, np, rempages, i, j, x, y, pa, offset;
    int s[10], fno[10][20];

    clrscr();

    printf("\nEnter the memory size -- ");
    scanf("%d", &ms);

    printf("\nEnter the page size -- ");
    scanf("%d", &ps);

    nop = ms / ps;
    printf("\nThe no. of pages available in memory are -- %d", nop);

    printf("\nEnter number of processes -- ");
    scanf("%d", &np);

    rempages = nop;

    for(i = 1; i <= np; i++) {
        printf("\nEnter no. of pages required for p[%d]-- ", i);
        scanf("%d", &s[i]);

        if(s[i] > rempages) {
            printf("\nMemory is Full");
```

```
            break;
        }

        rempages = rempages - s[i];

        printf("\nEnter page table for p[%d] --- ", i);
        for(j = 0; j < s[i]; j++) {
            scanf("%d", &fno[i][j]);
        }
    }

    printf("\nEnter Logical Address to find Physical Address ");
    printf("\nEnter process no., page number, and offset -- ");
    scanf("%d %d %d", &x, &y, &offset);

    if(x > np || y >= s[x] || offset >= ps) {
        printf("\nInvalid Process or Page Number or offset");
    } else {
        pa = fno[x][y] * ps + offset;
        printf("\nThe Physical Address is -- %d", pa);
    }

    getch();
    return 0;
}
```

OUTPUT:

```
Enter the memory size -- 100

Enter the page size -- 10

The no. of pages available in memory are -- 10
Enter number of processes -- 2

Enter no. of pages required for p[1] -- 3

Enter page table for p[1] ---
Page 0 -> Frame: 5
Page 1 -> Frame: 6
Page 2 -> Frame: 7

Enter no. of pages required for p[2] -- 2

Enter page table for p[2] ---
Page 0 -> Frame: 5
Page 1 -> Frame: 6

Enter Logical Address to find Physical Address
Enter process no., page number and offset -- 1 1 5

The Physical Address is -- 65
```