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DT-22037

OS LAB 10

Question 1: Implement the above code and paste the screen shot of the output.

Solution:

```
#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("Enter the page size: ");
    scanf("%d", &ps);

    nop = ms / ps;
    printf("The number of pages available in memory: %d\n", nop);

    printf("Enter number of processes: ");
    scanf("%d", &np);

    rempages = nop;

    for (i = 1; i <= np; i++)
    {
        printf("\nEnter number of pages required for process P[%d]: ", i);
        scanf("%d", &s[i]);

        if (s[i] > rempages)
        {
            printf("Memory is Full\n");
            break;
        }

        rempages -= s[i];

        printf("Enter page table for process P[%d]:\n", i);
        for (j = 0; j < s[i]; j++)
        {
```

```
            scanf("%d", &fno[i][j]);
        }
    }

    printf("\nEnter Logical Address to find Physical Address");
    printf("\nEnter process number, page number, and offset: ");
    scanf("%d %d %d", &x, &y, &offset);

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

    getch();
    return 0;
}
```

```
Enter the memory size: 1000
Enter the page size: 100
The number of pages available in memory: 10
Enter number of processes: 2

Enter number of pages required for process P[1]: 3
Enter page table for process P[1]:
5 6 7

Enter number of pages required for process P[2]: 2
Enter page table for process P[2]:
3 4

Enter Logical Address to find Physical Address
Enter process number, page number, and offset: 1 2 20
The Physical Address is: 720
```