Shayan
DT-22037

OS LAB 11

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

Solution:

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

int main()
{
    int b[20], l[20], n, i, pa, s, a, d;

    printf("\nProgram for Segmentation");
    printf("\nEnter the number of segments: ");
    scanf("%d", &n);

    printf("\nEnter the base address and limit for each segment:\n");
    for (i = 0; i < n; i++)
    {
        printf("Segment %d:\n", i);
        printf("  Base: ");
        scanf("%d", &b[i]);
        printf("  Limit: ");
        scanf("%d", &l[i]);
    }

    printf("\nEnter the segment number: ");
    scanf("%d", &s);
    printf("Enter the logical address (offset): ");
    scanf("%d", &d);

    if (s < 0 || s >= n)
    {
        printf("\nInvalid segment number.");
        return 1;
    }

    if (d < l[s])
    {
        pa = b[s] + d;
        a = b[s];
        printf("\n\tSeg.No.\tBaseAddr\tPhysAddr");
        printf("\n\t%d\t%d\t\t%d\n", s, a, pa);
    }
    else
```

```
    {
        printf("\nOffset exceeds segment limit.");
    }

    return 0;
}
```

```
Program for Segmentation
Enter the number of segments: 2

Enter the base address and limit for each segment:
Segment 0:
  Base: 1000
  Limit: 400
Segment 1:
  Base: 2000
  Limit: 300

Enter the segment number: 0
Enter the logical address (offset): 120

        Seg.No. BaseAddr        PhysAddr
        0       1000            1120
```