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**ROLL NO: DT-22030**  
**SUBJECT: OPERATING SYSTEM**  
**CODE: CT-353**  
**DATA SCIENCE**  
**THIRD YEAR**

## **OS LAB: 11**

### **CODE:**

```
#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 register for each segment:\n");
    for(i = 0; i < n; i++) {
        printf("Segment %d - Base: ", i);
        scanf("%d", &b[i]);
        printf("Segment %d - Limit: ", i);
        scanf("%d", &l[i]);
    }

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

    if(s < n) {
        if(d < l[s]) {
            pa = b[s] + d;
            a = b[s];
            printf("\n\tSegment\t\tBaseAdd\tPhysicalAdd\n");
            printf("\t\t%d\t\t%d\t\t%d\n", s, a, pa);
        }
    }
}
```

```

    } else {
        printf("\nOffset exceeds segment limit.");
    }
} else {
    printf("\nInvalid segment number.");
}

return 0;
}

```

## OUTPUT:

```

Program for Segmentation
Enter the number of segments: 3

Enter the base address and limit for each segment:
Segment 0 Base: 100
Segment 0 Limit: 50
Segment 1 Base: 200
Segment 1 Limit: 30
Segment 2 Base: 300
Segment 2 Limit: 40

Enter the segment number: 1
Enter the offset (logical address): 20

```

Segment	Base	Logical	Physical
1	200	20	220