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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 BaseAdd\tPhysicalAdd\n");
            printf("\t%d\t %d\t\t%d\n", s, a, pa);
```

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

    return 0;
}
```

OUTPUT: