

## LAB 11

Implement the above code and paste the screen shot of the output.

CODE:

```
#include <stdio.h>

#include <stdlib.h> // for exit()


int main() {
    int base[20], limit[20], n, i, pa, segment, offset;


    printf("Program for Segmentation\n");


    printf("Enter the number of segments: ");
    scanf("%d", &n);


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

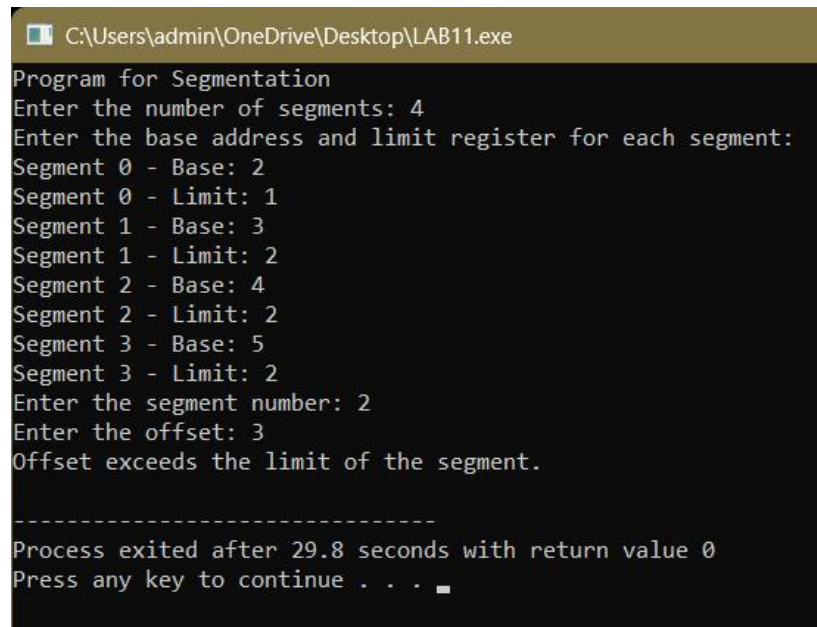

    printf("Enter the segment number: ");
    scanf("%d", &segment);


    printf("Enter the offset: ");
    scanf("%d", &offset);
```

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```
if (segment >= n) {  
    printf("Invalid segment number.\n");  
} else if (offset >= limit[segment]) {  
    printf("Offset exceeds the limit of the segment.\n");  
} else {  
    pa = base[segment] + offset;  
    printf("\n\tSegment\tBase\tOffset\tPhysical Address\n");  
    printf("\t%d\t%d\t%d\t%d\n", segment, base[segment], offset, pa);  
}  
  
return 0;  
}
```

OUTPUT:



```
C:\Users\admin\OneDrive\Desktop\LAB11.exe  
Program for Segmentation  
Enter the number of segments: 4  
Enter the base address and limit register for each segment:  
Segment 0 - Base: 2  
Segment 0 - Limit: 1  
Segment 1 - Base: 3  
Segment 1 - Limit: 2  
Segment 2 - Base: 4  
Segment 2 - Limit: 2  
Segment 3 - Base: 5  
Segment 3 - Limit: 2  
Enter the segment number: 2  
Enter the offset: 3  
Offset exceeds the limit of the segment.  
-----  
Process exited after 29.8 seconds with return value 0  
Press any key to continue . . .
```