TASKEEN SADIQ
DT-22004

OS LAB 11

```
#include <stdio.h>

#include <stdlib.h>


int main() {

 int base[20], limit[20], n, i, pa, segment_no, offset;


 printf("\nProgram for Segmentation");

 printf("\nEnter the number of segments: ");

 scanf("%d", &n);


 printf("Enter the base address and limit for each segment:\n");

for(i = 0; i < n; i++) {

 printf("Segment %d:\n", i);

 printf(" Base: ");

 scanf("%d", &base[i]);

 printf(" Limit: ");

 scanf("%d", &limit[i]);

 }


 printf("\nEnter the segment number: ");

 scanf("%d", &segment_no);
if(segment_no < 0 || segment_no >= n) {

 printf("Invalid segment number!\n");

 return 1;

 }
```

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

 if(offset < limit[segment_no]) {
 pa = base[segment_no] + offset;
 printf("\n\tSegment No.\tBase Address\tPhysical Address\n");
printf("\t%d\t\t%d\t\t%d\n", segment_no, base[segment_no], pa);  }
else {
 printf("Offset exceeds segment limit.\n");
 }

 return 0;
}
```

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```
Program for Segmentation
Enter the number of segments: 3
Enter the base address and limit for each segment:
Segment 0:
 Base: 0
 Limit: 100
Segment 1:
 Base: 200
 Limit: 150
Segment 2:
 Base: 200
 Limit: 150

Enter the segment number: 1
Enter the offset: 20

    Segment No. Base Address    Physical Address
    1       200     220


=== Code Execution Successful ===
```

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```
Program for Segmentation
Enter the number of segments: 3
Enter the base address and limit for each segment:
Segment 0:
 Base: 0
 Limit: 100
Segment 1:
 Base: 200
 Limit: 150
Segment 2:
 Base: 400
 Limit: 200

Enter the segment number: 1
Enter the offset: 200
Offset exceeds segment limit.


=== Code Execution Successful ===
```