LAB 11

QUESTION: Write a C Program to simulate segmentation technique of memory management.

ANSWER:

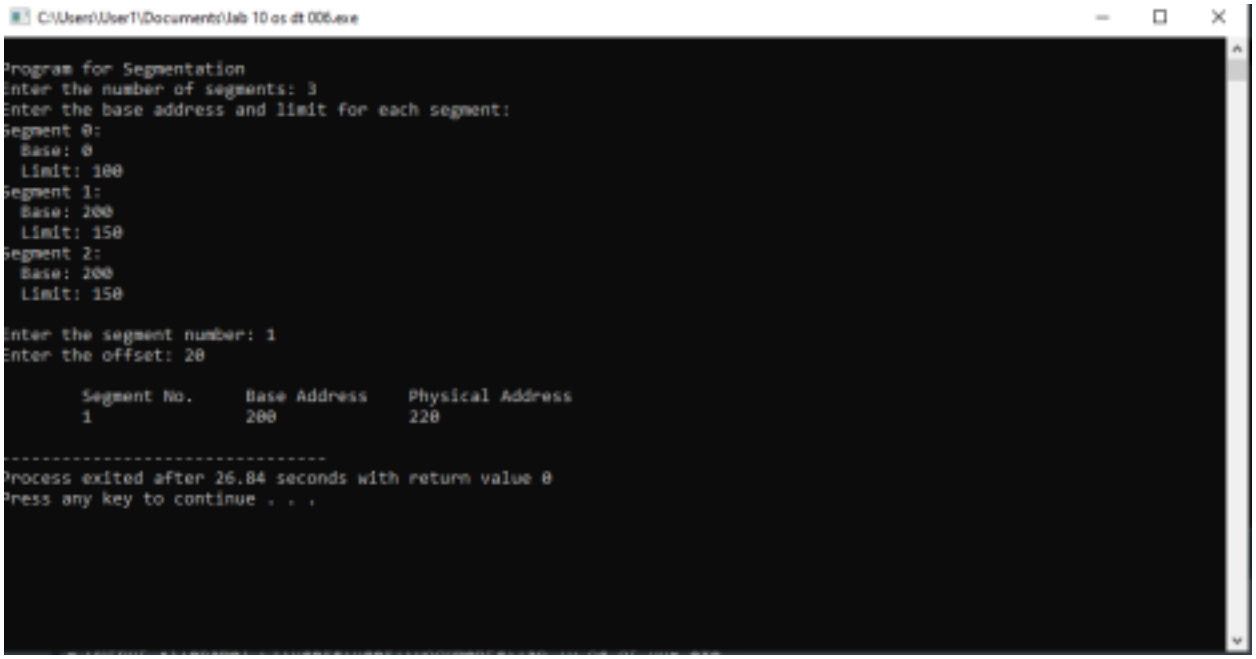
CODE:

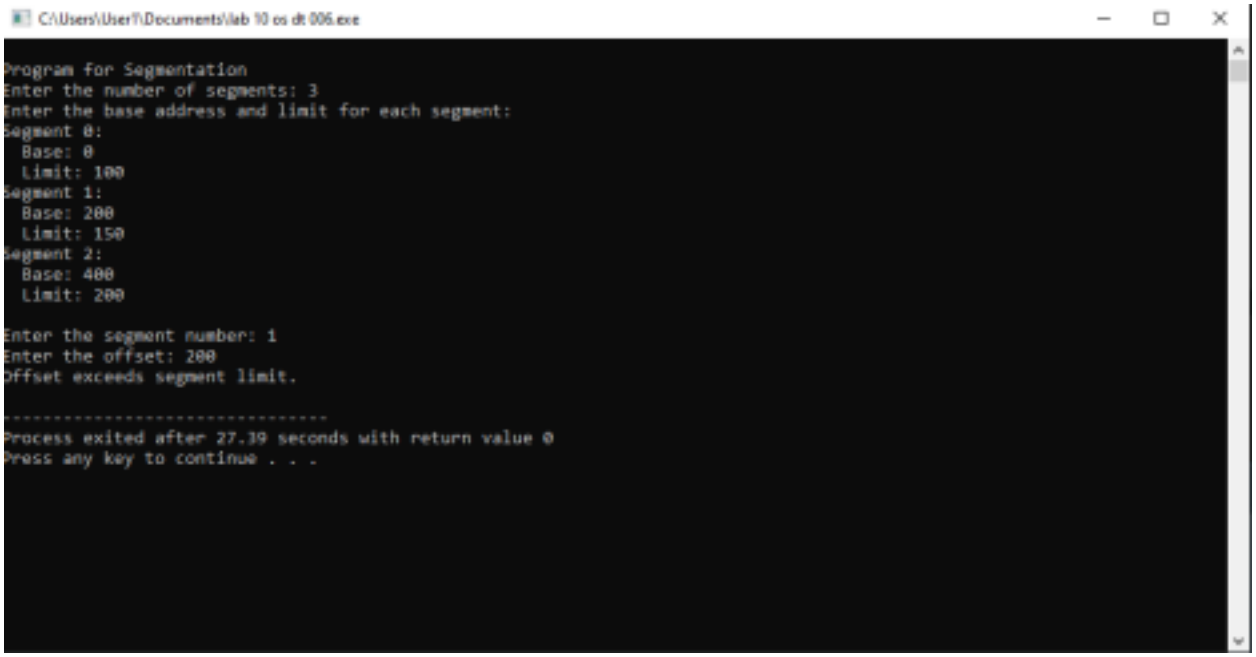
```
#include <stdio.h>

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


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;
}

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;
}
```

OUTPUT:

Course: OPERATING SYSTEMS
Course code: CT-353





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