VIT-AP UNIVERSITY

School: SCOPE | Semester: WIN SEM 2021-2

Subject: Operating System Lab | Subject Code: CSE2008

Assignment 9

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QUESTION NUMBER 1:

Implementation of memory management using segmentation.

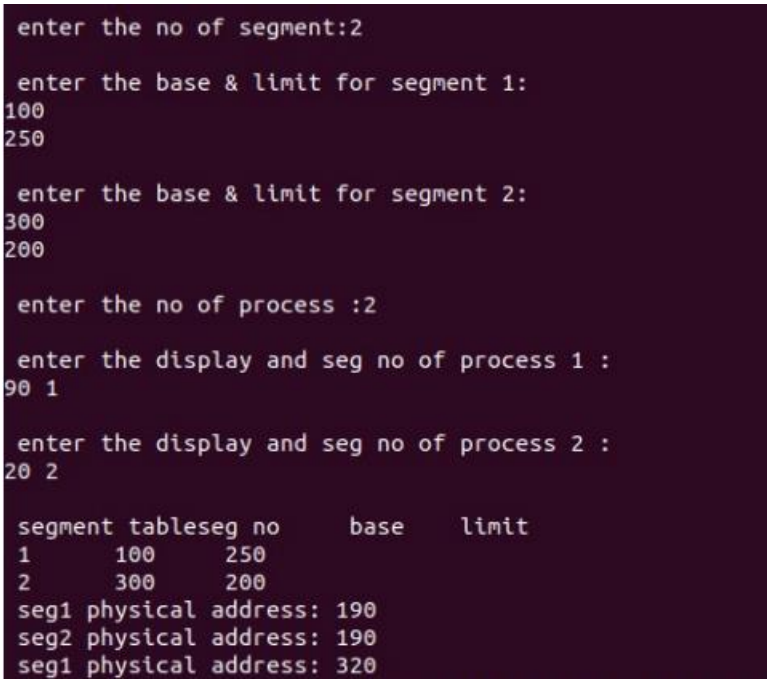
CODE:

```
#include<stdio.h>
struct segtable {
int base;
int limit;
}
seg[10];
 int main(){

int i,index,loop.process[10],num,segno[10],phy,number,disp[10];
printf("\n enter the no of segment:");
      scanf("%d",&num);
aa:for(index=1;index<=num;index++){
   printf("\n enter the base & limit for segment %d: \n",index);
    scanf("\n%d%d",&seg[index].base,&seg[index].limit);
for(index=1;index<=num;index++){
i=index;
if(i<1)
if(seg[index].base+seg[index].limit>seg[i--].base+seg[i--].limit)
```

```
   {
      printf("\n incorrect base");

goto aa;
   }
}
printf("\n enter the no of process :");
scanf("%d",&number);
for(index=1;index<=number;index++)
   {
      printf("\n enter the display and seg no of process %d: \n",index);
scanf("%d%d",&disp[index],&segno[index]);
printf("\n segment table");
printf("seg no \t base \t limit");
for(index=1;index<=num;index++){
printf("\n %d\t%d\t%d",index,seg[index].base,seg[index].limit);
   }
 for(index=1;index<=num;index++)
   {
      for(loop=1;loop<=nunber;loop++)
      {
         if(segno[index]==loop)
         {
               phy=disp[index]+seg[loop].base;
         printf("\n seg1 physical address:%d",phy);
         if(seg[index].limit+seg[index].base<phy)
            printf("in illegal address");
         else
            printf("\n seg2 physical address: %d",phy);
```

```
    }
  }
}
```

OUTPUT:



```
 enter the no of segment:2

 enter the base & limit for segment 1:
100
250

 enter the base & limit for segment 2:
300
200

 enter the no of process :2

 enter the display and seg no of process 1 :
90 1

 enter the display and seg no of process 2 :
20 2

 segment tableseg no     base    limit
 1       100     250
 2       300     200
 seg1 physical address: 190
 seg2 physical address: 190
 seg1 physical address: 320
```