

Noman Ahmed
DT-22032

Operating System (CT-353)

Lab no 11

Noman Ahmed
DT-22032

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]);
    }
}
```

Noman Ahmed

DT-22032

```
}
```

```
printf("Enter the segment number: ");
```

```
scanf("%d", &segment);
```

```
printf("Enter the offset: ");
```

```
scanf("%d", &offset);
```

```
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;
```

```
}
```

Noman Ahmed
DT-22032

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 . . .
```