

## **PRACTICE PROGRAM TOWER OF HANOI APPLICATION OF STACK**

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
void tower(int n,char src,char temp,char dest);
```

```
int main()
```

```
{
```

```
    int num;
```

```
    printf("enter the number of discs \n");
```

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

```
    tower(num,'A','B','C');
```

```
    return 0;
```

```
}
```

```
void tower(int n,char src,char temp,char dest)
```

```
{
```

```
    if(n==1)
```

```
    {
```

```
        printf("move %d disc from %c to %c\n",n,src,dest);
```

```
    }
```

```
    else
```

```
    {
```

```
        tower(n-1,src,dest,temp);  
        printf("move %d disc from %c to %c\n",n,src,dest);  
        tower(n-1,temp,src,dest);  
    }  
}
```

**OUTPUT:**

```
enter the number of discs  
3  
move 1 disc from A to C  
move 2 disc from A to B  
move 1 disc from C to B  
move 3 disc from A to C  
move 1 disc from B to A  
move 2 disc from B to C  
move 1 disc from A to C
```