

## Pattern2

Write a C program that reads in a positive number on height between 1 and 9, and prints a pattern according to height. For example, if the height is 9, then the following pattern will be printed. There is no need to check user input errors in your program.

```
1
232
34543
4567654
567898765
67890109876
7890123210987
890123454321098
90123456765432109
```

A sample program template is given below:

```
#include <stdio.h>
int main()
{
    /* Write your code here */
    return 0;
}
```

```
#include <stdio.h>
int main()
{
    int height;
    int i,j,num;

    printf("Enter the height:\n");
    scanf("%d",&height);
    printf("The pattern is:\n");
```

Sample input and output sessions are given below:

### (1) Test Case 1:

Enter the height:

5

The pattern is:

```
. . 1
232
34543
4567654
567898765
```

print spaces

print left side, %10 is for  
when num>9,  
use for(i=0;j<=i;j++)

### (2) Test Case 2:

Enter the height:

8

The pattern is:

```
1
232
34543
4567654
567898765
67890109876
7890123210987
890123454321098
```

print right side ,num-j to get  
decreasing value, use  
for(j=0;j<i;j++)

```
for(i=0;i<height;i++)
```

```
{
    num=i;
    for(j=0;j<height-i-1;j++)
```

```
{
    printf(" ");
```

```
}
    for(j=0;j<=i;j++)
```

```
{
    num++;
    printf("%d",(num)%10);
```

```
}
```

```
num--;
```

```
for(j=0;j<i;j++)
```

```
{
    printf("%d",(num-j)%10);
```

```
}
```

```
printf("\n");
```

```
}
```

reduce value  
of num first

for next line