

5.3 Try to walkthrough the following program. The program reads a number *Size* and prints a triangle of asterisks with base and height *Size*.

```
/* This program reads a number Size and prints a triangle */

#include <stdio.h>
#define PrintChar '*'
int main (void)
{
    int Size;
    int Len;
    int i;

    printf("\nWelcome. This program prints a triangle for you.");
    printf("\nPlease input an integer for the size : ");
    scanf("%d", &Size);
    for (Len=1; Len<=Size; Len++)
    {
        for (i=1; i<=Size-Len+1; i++)
            printf(" ");
        for (i=1; i<=Len; i++)
            printf("%c", PrintChar);
        printf("\n");
    }

    printf("\n\nEnd of Program");
    printf("\n");

    return 0;
}
```

Sample running :

Welcome. This program prints a triangle for you.
Please input an integer for the size : 6<CR>

Task : (a) Modify the segment of the program

```
for (i=1; i<=Size-Len+1; i++)
    printf(" ");
for (i=1; i<=Len; i++)
    printf("%c", PrintChar);
```

to

```
for (i=1; i<=Size-Len+1; i++)
    printf(" ");
for (i=1; i<=Len; i++)
    printf(" %c", PrintChar);
```

Try to write down the results and execute the program for comparison.**Sample running :****(b) Modify the segment of the program**

```
for (i=1; i<=Size-Len+1; i++)
    printf(" ");
for (i=1; i<=Len; i++)
    printf(" %c", PrintChar);
```

to

```
for (i=1; i<=Len; i++)
    printf("%c", PrintChar);
for (i=1; i<=Size-Len+1; i++)
    printf(" ");
```

Try to write down the results and execute the program for comparison.**Sample running :**