

C Programming

Practice 3

Contents

- if statement
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-
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if statement

```
if ( condition statement )  
start→ {  
        statement;  
end→ }
```

if-else statement

```
if ( condition statement )  
start→ {  
        statement;  
}  
else  
{  
        statement;  
end→ }
```

if-else if statement

```
        if ( condition statement )
start→ {
            statement;
        }
        else if ( condition statement )
        {
            statement;
        }
        else
        {
            statement;
end→ }
}
```

switch statement

```
switch (condition variable) {  
    case c1:  
        ...  
        break;  
    case c2:  
    case c3:  
        ...  
        break;  
    default:  
        ...  
        break;  
}
```

switch & if-else

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

switch (num) {
    case 0:
        printf ( "ZEROWn" );
        break;
    case 1:
        printf ( "ONEWn" );
        break;
    default:
        printf ( "None of themWn" );
        break;
}
```

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

if (num==0)
    printf ( "ZEROWn" );
else if (num==1)
    printf ( "ONEWn" );
else
    printf ( "None of themWn" );
```

For statement

```
for(i=0; i<10; i++) {  
    statement  
}
```

Counter Initialization Repeat conditions Counter Change: ex) ++i, i+2, --i, i--, i+2 등

Homework 5 - Asterisk printing1

- Write a program that outputs a triangle with a '*' character

```
*
**
***
****
*****

>>> ===== RESTART =====
>>>
Height : 6
*
**
***
****
*****
*****
```

- Input the Height repeatedly using the While statement
- Output a '*' character using the For statement

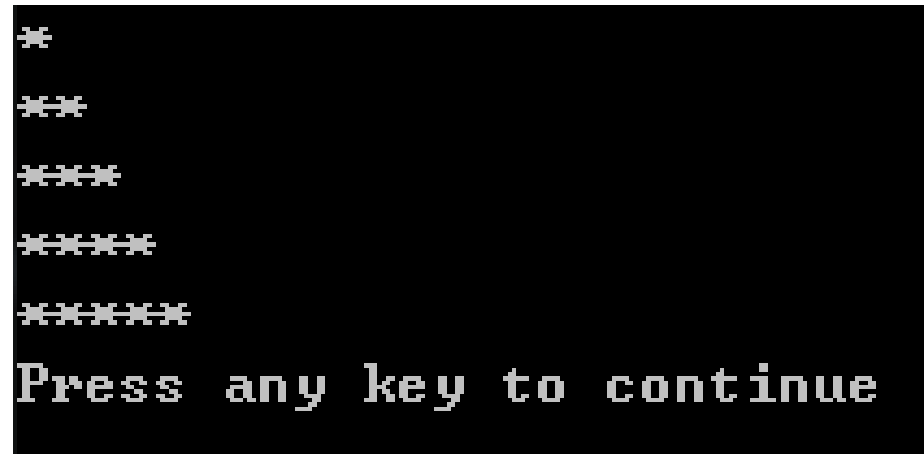
Homework 5 - Asterisk printing1

reference code

```
#include <stdio.h>

int main(void)
{
    int a, b; // a is row, b is column

    for(a=0; a<5; a++)
    {
        for(b=0; b<=a; b++)
        {
            printf("*");
        }
        printf("\n");
    }
}
```



```
**
***
****
*****
*****
Press any key to continue
```

Homework 6 - Asterisk printing2

- Write a program that outputs a triangle with a '*' character

**

*

```
Height : 5
*****
****
***
**
*
>>> ===== RESTART =====
>>>
Height : 6
*****
*****
****
***
**
*
```

- Input the Height repeatedly using the While statement
- Output a '*' character using the For statement

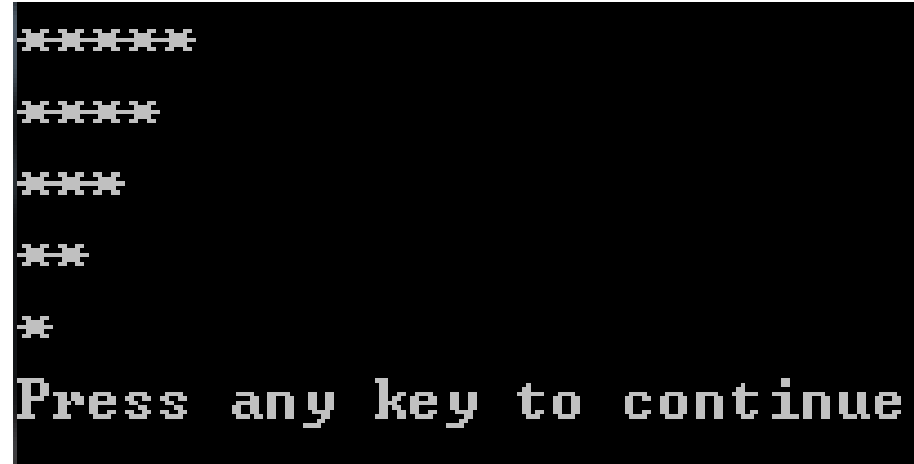
Homework 6 - Asterisk printing2

reference code

```
#include <stdio.h>

int main(void)
{
    int a, b; // a is row, b is column

    for(a=5; a>0; a--)
    {
        for(b=0; b<a; b++)
        {
            printf("*");
        }
        printf("\n");
    }
}
```



```
*****
****
***
**
*
Press any key to continue
```

Extra Homework - guess the number (1 points)

- Define a number between one and one hundred
- If a user input a number, the computer output "Too high!" or "Too low!"
- If you guess the number in 6 tries, print "That's Correct!"
- If not, print "Sorry, bye bye~"

```
I'm thinking of a number between and including 1 to 100.  
Can you guess the number in 6 tries?  
Enter guess number 1: 50  
Too high!  
Enter guess number 2: 25  
Too low!  
Enter guess number 3: 35  
Too high!  
Enter guess number 4: 30  
Too low!  
Enter guess number 5: 33  
Too low!  
Enter guess number 6: 34  
That's Correct!
```

Project 1 - Diamond printing(5 points)

- ※ **Deadline for project: 2015. 10. 7 (Wednesday)**

- Write a program that outputs a diamond shape
- Use `'*'`, `' '`, and new line character(`'\n'`)
- Use the for statement
- The first line has four `' '` and one `'*'`
- The second line has three `' '` and three `'*'`
- The third line has two `' '` and five `'*'`
- The fourth line has one `' '` and seven `'*'`
- The fifth line has nine `'*'`, and the following line is in reverse

완성 결과)

```

    *
  ***
 *****
*****
*****
  ***
    *
```

Homework form

- Homework submission e-mail:

hizorro99@naver.com

- E-mail title: Thursday or Friday_name_#week
 - Ex) Friday_james_week4
 - Ex) 금요일반_장원철_4주차
- File title: student id_name_week#_1.c
 - Ex) 2014123456_james_hw1.c (or .cpp)
 - Ex) 2014123456_james_hw2.c (or .cpp)
 - Ex) 2014123456_james_extra.c (or .cpp)
 - Ex) 2014123456_james_project1.c (or .cpp)