

Assignment 5

(Looping and repetition)

Chung-Ang University

Exercise 1

- Write the following program code

```
#include <stdio.h>
int main()
{
    int count=1;
    while (count <= 4)
    {
        printf("%d ", count);
        count++;
    }
    return 0;
}
```

Exercise 2

- Write the following program code

```
#include <stdio.h>
int main()
{
    int num, count, sum = 0;

    printf("Enter a positive integer: ");
    scanf("%d", &num);

    for(count = 1; count <= num; ++count)
    {
        sum += count;
    }

    printf("Sum = %d", sum);

    return 0;
}
```

Exercise 3

- Write the following program code

```
#include <stdio.h>
int main()
{
    int i;
    int j;
    for (i=0; i<2; i++)
    {
        for (j=0; j<4; j++)
        {
            printf("%d, %d\n", i, j);
        }
    }
    return 0;
}
```

Exercise 4

- Write the following program code

```
#include <stdio.h>
int main()
{
    int i,j;
    for (i=1, j=1 ; i<3 || j<5 ; i++, j++)
    {
        printf("%d, %d\n",i ,j);
    }
    return 0;
}
```

Exercise 5

- Write the following program code

```
#include <stdio.h>
int main()
{
    int answer = 41;
    int guess;
    int tries = 0;

    do{
        printf("guess the answer: ");
        scanf("%d", &guess);
        tries++;

        if(guess > answer)
            printf("the number is higher than answer\n");
        if(guess < answer)
            printf("the number is lower than answer\n");
    }while (guess != answer);

    printf("tries = %d\n", tries);
    return 0;
}
```

Exercise 6

- Write a program showing the following output

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

Exercise 7

- Write a program showing the following output

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


Exercise 8

- When given number n, fill in the blank to print numbers 1 to n.

```
#include <stdio.h>
int main()
{
    int n;
    scanf("%d", &n);
    

Blank


    return 0;
}
```

- **output** (If input is 40)

```
1
2
...
40
```

Exercise 9

- When given number n, fill in the blank to print numbers n to zero.

```
#include <stdio.h>
int main()
{
    int n;
    scanf("%d", &n);
    

Blank


    return 0;
}
```

- **output** (If input is 40)

```
40
39
...
0
```

Exercise 10

- When given number, fill in the blank to print a number's multiplication table.

```
#include <stdio.h>
int main()
{
    int n;
    scanf("%d", &n);
    

Blank


    return 0;
}
```

- **output** (If input is 4)

```
4 * 1 = 4
4 * 2 = 8
...
4 * 9 = 36
```