

Assignment 6

(Preprocessing and I/O)

Chung-Ang University

Exercise 1

- Write the following program code

```
#include <stdio.h>
#define NAME "Son"
#define AGE 20
#define PRINT_ADDR puts("address: ...\n");
int main()
{
    printf("Name: %s\n", NAME);
    printf("Age: %d\n", AGE);
    PRINT_ADDR;
    return 0;
}
```

Exercise 2

- Write the following program code

```
#include <stdio.h>
#define SQUARE(x) x*x

int main()
{
    int num = 20;
    printf("Square of num : %d\n", SQUARE(num));
    printf("Square of -5 : %d\n", SQUARE(-5));
    printf("Square of 2.5: %f\n", SQUARE(2.5));
    return 0;
}
```

Exercise 3

- Write the following program code

```
#include <stdio.h>
#define DIFF_ABS(x, y) ((x)>(y) ? (x)-(y) : (y)-(x))
int main()
{
    printf("difference: %d\n", DIFF_ABS(5, 7));
    printf("difference: %f\n", DIFF_ABS(1.8, -1.4));
    return 0;
}
```

Exercise 4

- Write the following program code

```
#include <stdio.h>
#define ADD 1
#define MIN 0
#define _CRT_SECURE_NO_WARNINGS
int main () {

    int num1, num2;
    printf("enter two integers: ");
    scanf("%d %d", &num1, &num2);
    #if ADD
        printf("%d + %d = %d\n", num1, num2, num1+num2);
    #endif
    #if MIN
        printf("%d - %d = %d\n", num1, num2, num1-num2);
    #endif
    return 0;
}
```

Exercise 5

- Write the following program code

```
#include <stdio.h>
#define HIT_NUM 7
#define _CRT_SECURE_NO_WARNINGS
int main()
{
    #if HIT_NUM == 5
        puts("HIT_NUM is 5);
    #elif HIT_NUM == 6
        puts("HIT_NUM is 6);
    #elif HIT_NUM == 7
        puts("HIT_NUM is 7);
    #else
        puts("HIT_NUM is not 5, 6, and 7);
    #endif
    return 0;
}
```

Exercise 6

- **Fill in the blank with following conditions**
 - Define a macro function that returns a large value comparing two values
 - Define a macro function that returns a small value comparing two values

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

blank

```
#define _CRT_SECURE_NO_WARNINGS
```

```
int main () {
```

```
    int num1, num2;
```

```
    printf("enter two integers: ");
```

```
    scanf("%d %d", &num1, &num2);
```

```
    printf ("large : %d \n", MY_MAX(num1,num2));
```

```
    printf("small : %d \n", MY_MIN(num1,numw));
```

```
    return 0;
```

```
}
```

Exercise 7

- **Making a program with following conditions**
 - Print date, time, file name.
 - You should use predefined macro
 - File name should be formatted as student number_student name (EX, 20210000_honggildong.c)

Exercise 8

- **Making a program with following conditions**
 - Get two int inputs x, y (x and y are 1~100)
 - Print result of inputs with 5 operation (+, -, *, /, %) line by line
 - Output EX: if(x= 5, y =5)

5 + 5 = 10

5 - 5 = 0

5 * 5 = 25

5 / 5 = 1

5 % 5 = 0

Exercise 9

- Making a program with following conditions
 - Get one int input x
 - Print sum of (1 to x)
 - Output EX: if x = 5

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Exercise 10

- **Making a program with following conditions**
 - Get one int input int that is number of operation
 - Get two int inputs x,y for number of operation time
 - Print each case's result with following format.
 - Case #number of case : $x + y = x+y$
 - Output EX: if number of case = 2, $x = 5, y = 7$, $x = 7, y = 5$

Operation #1: $5 + 7 = 12$

Operation #2: $7 + 5 = 12$