

DCP1203 HW3

10/03

Outline

- Announcements & Advices
- HW2 Discussion
- HW3 Explanation

Announcements & Advices

Announcements

- CHECK YOUR MAILBOX
- CORRECT FORMAT FOR HOMEWORKS
 - In compressed(zip..) files -> 50%
 - Wrong file name -> 50%
 - in .cpp(C++ file) -> 50%

Announcements

- No lab hour next week, but homework remains
- Grades in detail can be viewed online
- Answers by TAs will be uploaded
- Remember your README file
 - Either README.md or README.txt

Advices

- Watch your coding style(variable name..)
- Write comments

```
int main(int argc, char** argv) {  
  
    int month, date, year;    //Variable named according to their functions  
  
    printf("Enter a date (mm/dd/yyyy): ");  
    scanf("%d/%d/%d", &month, &date, &year);  
    printf("You entered the date %d", year);  
    if(month < 10){  
        /*  
         The following code is pushed to the right since it is  
         inside the if statement(like smaller than this "if"  
        */  
        printf("0");  
    }  
    printf("%d", month);  
}
```

HW2 Discussion

Question 1

- `scanf("format", &variable name);`
 - format: how you take in the input
 - &: taking reference
- Example

```
int a, b, c;  
printf("Your input: ");  
scanf("%d %d/%d", &a, &b, &c);  
printf("Previous input: %d %d/%d\n", a, b, c);
```


- Answer

Your input: 1 2/3

Previous input: 1 2/3

Question 2

- `scanf("%d/%d/%d", &month, &day, &year);`
 - Why not `%s`?
 - String? `fgets()`, `getchar()`
- 0 disappearing?
 - `if-else`
 - `printf("%02d", mm);`

Question 3

- `printf("%.2f", num);`
- The rounding problem?
 - Times 100 and divide

Question 4

- `+, -, *, /`
- Positive difference?
 - `if-else`
 - `abs()`
- `printf("%f", (float) a / b);`

Question 5

- ASCII: alphabet encoding system
- `printf("%d", (int) cha[i]);`

Question 6

- while loop (judge the input)
- Even? Odd?
 - %: modulo, finding remainder

HW3 Explanation

Problem 1

- Write a program that takes in three integers and print output the numbers in descending order

```
Input 3 integers(seperate each with spaces): 1 5 9
9 5 1
請按任意鍵繼續 . . .
```

```
Input 3 integers(seperate each with spaces): 1 2 1
2 1 1
請按任意鍵繼續 . . .
```


Problem 2

- Write a program that takes in a 2-digit number, and print it out with its digits reversed

```
Input a 2-digit number: 21
The reversal output: 12
請按任意鍵繼續 . . .
```

Problem 3

- Here's a quiz with 14 questions, and the points are calculated in the following way:
 - 1~8 correct answers -> each worth 8 points
 - ≥ 9 correct answers -> 8 of them worth 8 points each, and 6 points each for the rest

Please write a program that takes in the number of correct answers and outputs the result

Problem 3

```
Please enter the number of correct answer: 10  
The score is: 76  
請按任意鍵繼續 . . .
```

```
Please enter the number of correct answer: 3  
The score is: 24  
請按任意鍵繼續 . . .
```

Problem 4

- Please write a program that takes sex and age as input, and determine whether he / she is marriageable. For boys, enter 1 for gender, and 2 for girls
(Hint. Boys/Girls need to be greater than 18/16 years old to be marriageable)

```
Please enter your gender: 1
Please enter your age: 16
You are NOT marriageable.
請按任意鍵繼續 . . .
```

Problem 5

- Please write a program displays the name of the month that user entered using switch case. If illegal input is detected, keep asking until correct input is typed. Enter 0 to quit the program

```
Please enter the month: 5
May
Please enter the month: 16
Invalid input. Please try again...
Please enter the month: 0
Goodbye
請按任意鍵繼續 . . .
```

Problem 6

- Write a program to show a multiplication table. Use loop instead of listing them all with printf

```
01 * 01 = 01  08 * 03 = 24
01 * 02 = 02  08 * 04 = 32
01 * 03 = 03  08 * 05 = 40
01 * 04 = 04  08 * 06 = 48
01 * 05 = 05  08 * 07 = 56
01 * 06 = 06  08 * 08 = 64
01 * 07 = 07  08 * 09 = 72
01 * 08 = 08  09 * 01 = 09
01 * 09 = 09  09 * 02 = 18
02 * 01 = 02  09 * 03 = 27
02 * 02 = 04  09 * 04 = 36
02 * 03 = 06  09 * 05 = 45
02 * 04 = 08  09 * 06 = 54
02 * 05 = 10  09 * 07 = 63
02 * 06 = 12  09 * 08 = 72
02 * 07 = 14  09 * 09 = 81
請按任意鍵繼續 . . .
```