

## WEEK5 HOMEWORK

1. 输入一个分数（0-100）并将其转换为一个相应的成绩，分别使用if ... else语句和switch语句来完成。测试你的程序是否正确。

Enter a score (0-100) and convert it to a corresponding grade. Use if ... else statement and switch statement separately. Test your program.

A: 90-100

B: 80-89

C: 70-79

D: 60-69

E: 0-59

2. 写出下列表达式：

Construct expressions to express the following conditions:

a. number is equal to or greater than 90 but smaller than 100.

b. ch is not a q or a k character.

c. number is between 1 and 9 (including the end values) but is not a 5.

d. number is not between 1 and 9.

3. 编写一个程序，请求一周的工作时间，然后输出总工资、税款和净工资。假设如下：

Write a program that requests the hours worked in a week and then prints the gross pay, the taxes, and the net pay. Assume the following:

a. 基本工资 Basic pay rate = \$10.00/hr

b. 加班（超过40小时） Overtime (in excess of 40 hours) = time and a half

c. 税率 Tax rate: 15% of the first \$300

20% of the next \$150

25% of the rest

4. 编写一个程序，请求用户输入一个两位数，然后打印这个两位数的英语单词：

Write a program that asks the user for a two-digit number, then prints the English word for the number:

Enter a two-digit number: 45

You entered the number forty-five

5. 观察当x=0和x=1时下列程序的输出，解释为什么会发生这种情况

Look at the output of the following programs when  $x = 0$  and  $x = 1$ , explain why this happened.

a)

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

```
int main() {  
    int x = 0, y = 1, z = 1;  
    if (x++ || y++)  
        z++;  
    printf("%d %d %d", x, y, z);  
    return 0;  
}
```

b)

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

```
int main() {  
    int x = 0, y = 1, z = 1;  
    if (x++ && y++)  
        z++;  
    printf("%d %d %d", x, y, z);  
    return 0;  
}
```

6. 输入一个3位数整数，判断它是否为水仙花数，当输入数据不正确的时候（比如输入了两位或者四位整数）要给出错误提示。水仙花数的各位数字的立方和等于它本身，如 $153=1^3+5^3+3^3$ 。

Enter a 3-digit integer, determine whether it is a “daffodil number”, and give an error message when the input data is incorrect (such as entering a two-digit or four-digit integer).

The cubed sum of each number of a “daffodil number” equals itself, such as  $153=1^3+5^3+3^3$ .