

Worksheet 4

4.1 Try to walkthrough the following program and write down the expected results. Key-in the program and compare the results after execution. This program helps you to understand the use of *if-else* statement.

```
/* This program finds the payroll for an employee */

#include <stdio.h>
#define MaxRegHour 80
#define OT_factor 1.5

int main (void)
{
    int Hour;
    float Rate;
    float GrossPay;

    printf("\nWelcome. This program finds the Gross Pay");
    printf(" for input hours worked and rate.\n\n");

    printf("Please input the hourly rate of pay : ");
    scanf("%f", &Rate);
    printf("Please input the number of hours worked\n");
    printf("to a whole number of hours : ");
    scanf("%d", &Hour);

    if (Hour <= MaxRegHour)
        GrossPay = Rate * Hour;
    else
        GrossPay = Rate * MaxRegHour
            + OT_factor * Rate * (Hour - MaxRegHour);

    printf("\nHours worked = %5d", Hour);
    printf("\nHourly pay rate = %7.2f", Rate);
    printf("\nThe Gross pay = $%9.2f", GrossPay);
    printf("\n");

    return 0;
}
```

Sample running 1:

Welcome. This program finds the Gross Pay for input hours worked and rate.

Please input the hourly rate of pay : **20.0**<CR>

Please input the number of hours worked
to a whole number of hours : **70**<CR>

Sample running 2:

Welcome. This program finds the Gross Pay for input hours worked and rate.

Please input the hourly rate of pay : **15.0**<CR>

Please input the number of hours worked
to a whole number of hours : **100**<CR>