Lesson 11 Lab

Task 1: To define a program reads in an integer (in decimal) from user, and then prints it in octal, decimal and hex.

```
#include <stdio.h>

int main()
{
    int input;
    scanf("%d", &input);
    printf("Octal: %o\n", input);
    printf("Decimal: %d\n", input);
    printf("Hex: %x\n", input);
    return 0;
}
```

Task 2: To define a program reads in a float number from user, and then prints it with “%g”, “%f” and “%e”.

```
#include <stdio.h>

int main()
{
    float input;
    scanf("%f", &input);
    printf("g: %g\n", input);
    printf("f: %f\n", input);
    printf("r: %e\n", input);
    return 0;
}
```

Task 3: To define a program reads in a float number from user, and then prints the equivalent percentage.
For example, input: 0.123 -> print 12.3%

```
#include <stdio.h>

int main()
```

```
{
    float input;
    scanf("%f", &input);
    printf("%g%%", input * 100);
    return 0;
}
```

Task 4: To define a program to read in three numbers, and then to print them all twice with in two separate lines as below:
1) Frist time print, to make each of the numbers takes no less than 10 char spaces
2) Second time print, to align to left and each of them takes no less then 6 char spaces
Example: if input is 1, -200, 0
Output:
1 -200 0
1 -200 0

```
#include <stdio.h>

int main()
{
    int number1;
    int number2;
    int number3;

    scanf("%d %d %d", &number1, &number2, &number3);

    printf("%10d%10d%10d\n", number1, number2, number3);
    printf("%-6d%-6d%-6d", number1, number2, number3);

    return 0;
}
```

Task 5: To define a program reads in three positive numbers (one integer in decimal, one integer in hex, and the last one as float in decimal), and then print them all three times (in each line of output, use comma to separate each number)

1) Print them all in octal (for the last number, only consider the integer part)
2) Print them all in hex with prefix “0x”(for the last number, same as above)

3) Print them all in float in decimal with at least 2 decimal digits

Eg: input as 1 11 11.11
Output:
1,21,13
0x1,0x11, 0xb
1.00, 17.00, 11.11

```
#include <stdio.h>

int main()
{
    int a;
    int b;
    float c;
    scanf("%d %x %f", &a, &b, &c);
    printf("%#o,%#o,%#o\n", a, b, (int)c);
    printf("%#x,%#x,%#x\n", a, b, (int)c);
    printf("%.2f,%.2f,%.2f\n", a * 1.0, b* 1.0, c* 1.0);

    return 0;
}
```