

# Lab 9

# Task 30

Modify the following program so that values of *a* and *b* can be exchanged.

```
#include<stdio.h>

void exchange(int x, int y);

int main()
{
    int a = 10, b = 20;
    printf( "before exchange: a = %d, b = %d\n" , a, b);
    exchange(a, b);
    printf( "after exchange: a = %d, b = %d\n" , a, b);
    return 0;
}

void exchange(int x, int y){
    int temp;
    temp = x;
    x = y;
    y = temp;
}
```

# Task 31

Finish the program according to the requirements in the comments.

```
#include<stdio.h>
struct Student{
    char str[10];
    int marks;
};
int main()
{
    int values[5] = {2, 4, 6, 8, 22};
    char str[10];
    char *p;
    int n=0 i;
    struct Student stu[20];
    struct Student *ps;

    strcpy(str, "UVWXYZ");
    p = str;

    // print the third element in the array values using three different expressions.
    printf("%d %d %d\n", ___, ___, ___);
    printf("%c %c\n", ___, ___); //print third char in str through str and p respectively
    printf("%s, %s\n", ___, ___); //print str string through str and p respectively

    for (i = 0; i < 20; i++) {
        scanf("%s %d", ___, ___); // read student's name and marks
        if (stu[i].marks == -1)
            break;
    }
    n = i -1;
    // with the following two statements, print out the name and marks throught ps
    _____;
    printf("first student\'s name:%s, marks:%d\n". ps____, ps____);
    return 0;
}
```

# Task 32

Write a function `char* stringCopy(char *dest, char *src)` to copy the string stored in `src` to `dest`. The function `strcpy` is NOT allowed to use. *String.h* CANNOT be included. The *main* function is as follows:

```
int main()
{
    char str1[20], str2[20];
    scanf("%s", str1);
    stringCopy(str2, str1);
    printf("%s\n", str2);
    return 0;
}
```

# Add info about a program

At the top of each program, add the information (comments in **GREEN**). It is also required for **EACH lab program** in this semester.

```
// Programmer: .....  
// Student ID: .....  
// Date:....  
// Task no: Week_#_Task_#  
// Requirements: .....  
#include<stdio.h>  
int main()  
{  
    .....  
}
```

# Submission

- Compressed \*.cpp into one file with file name in the format *Lab9\_#####.zip* and submit it into iSpace.
- All .cpp files must be able to run under Visual 2010 C++ Express. The outputs will be checked against the outputs under Visual 2010 C++ Express