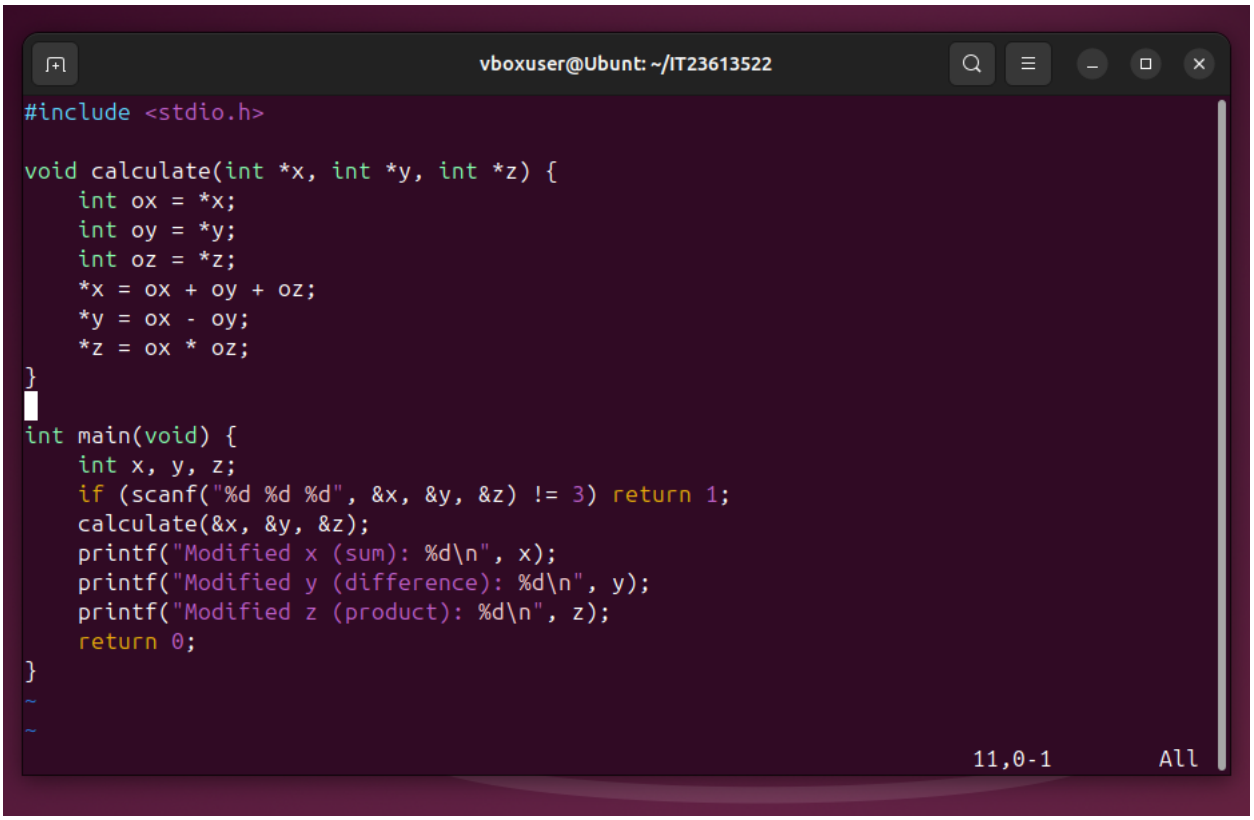
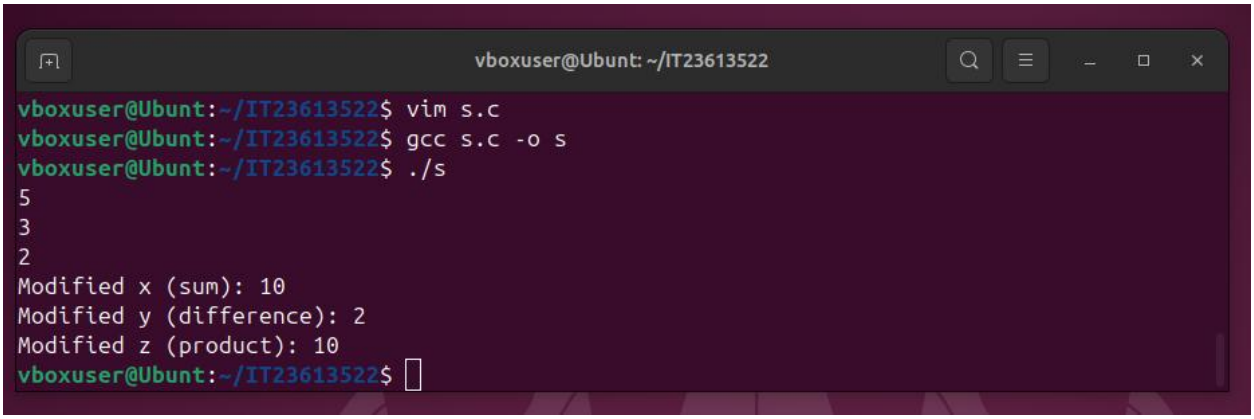
Programming Methodology - SE1012

Lab 7

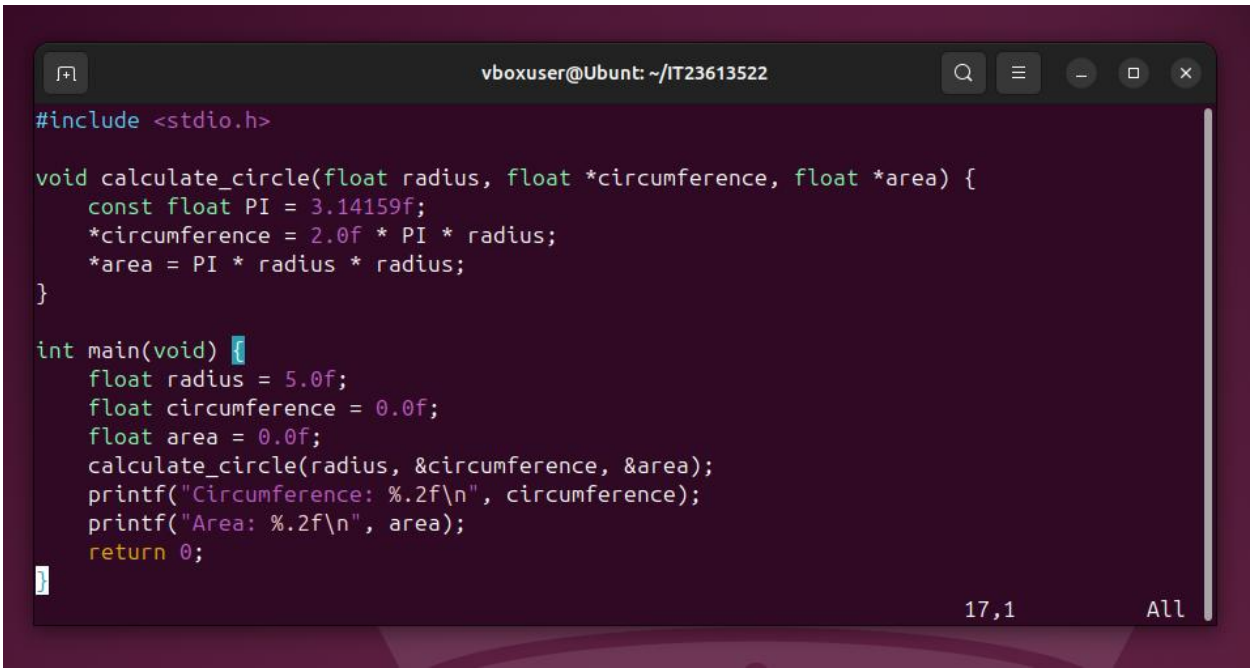
IT23613522

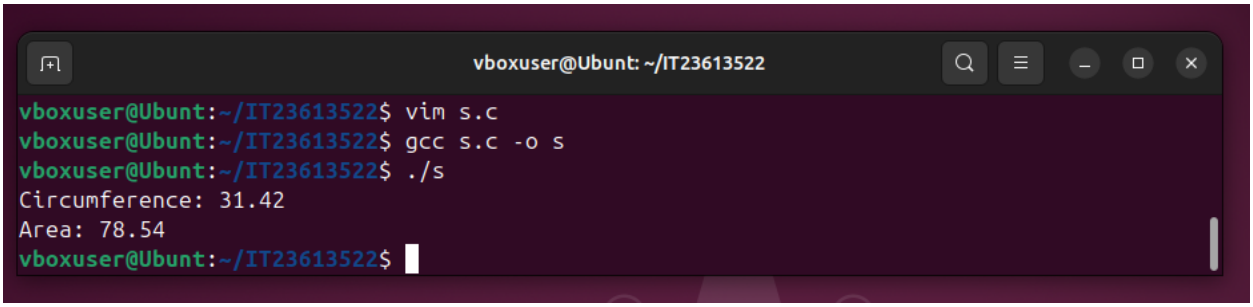
1.Pointer Manipulation with Multiple Variables



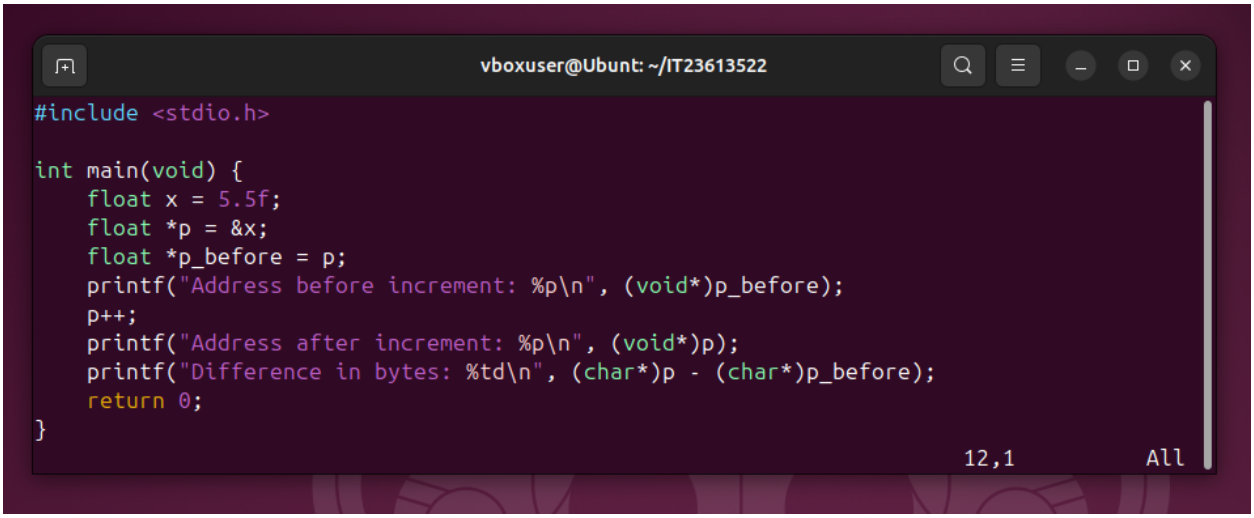


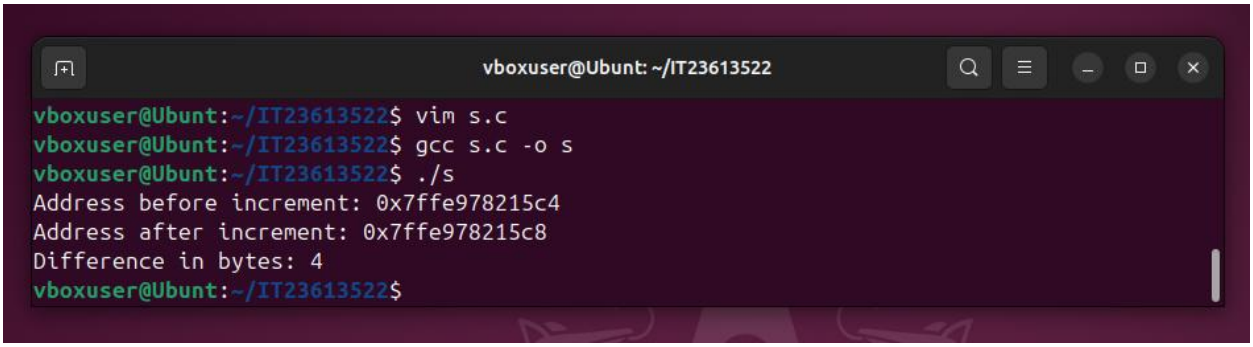
2. Functions with Output Parameters



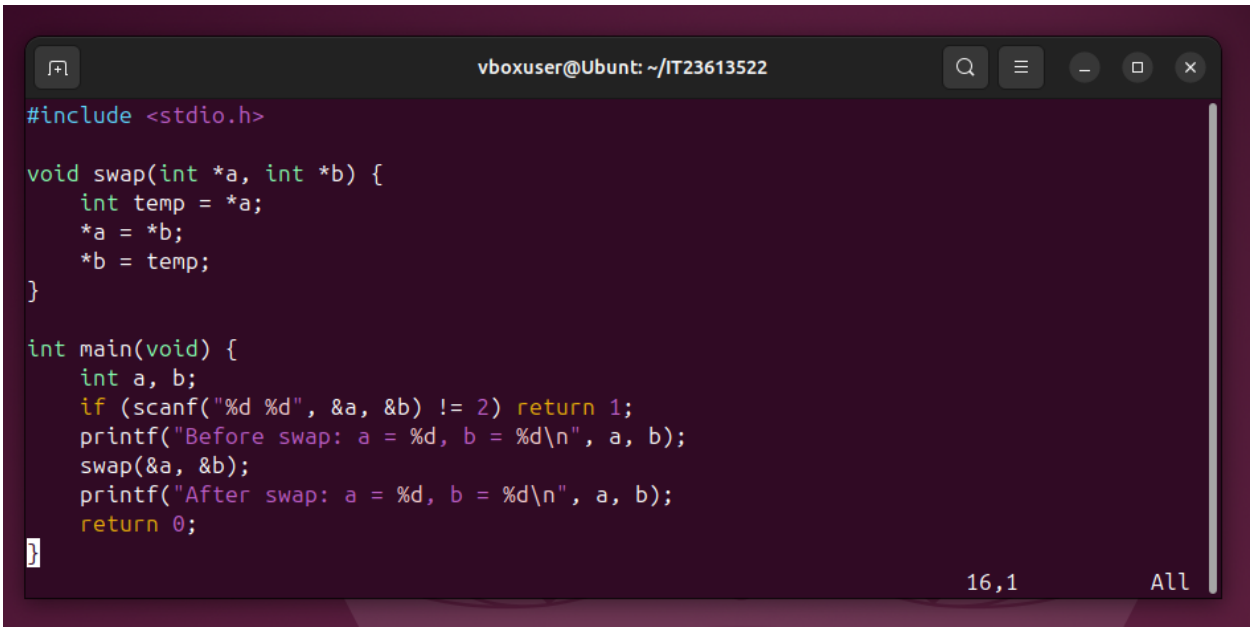


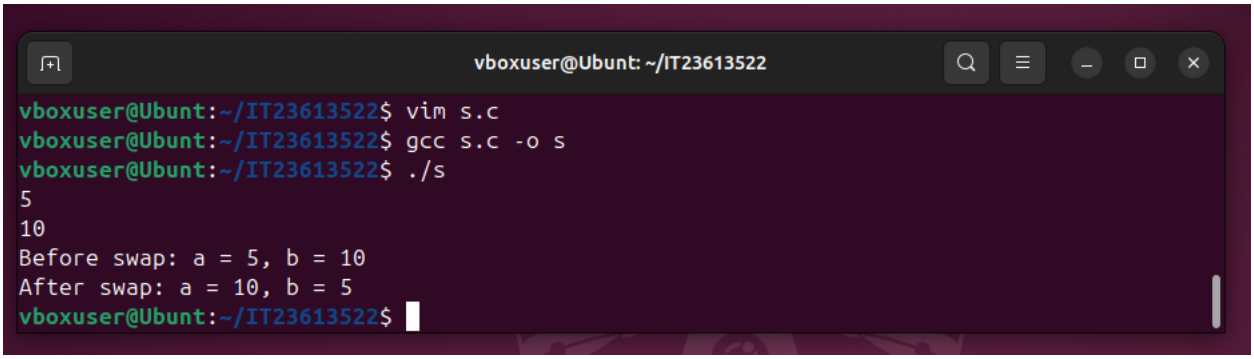
3. Pointer Arithmetic



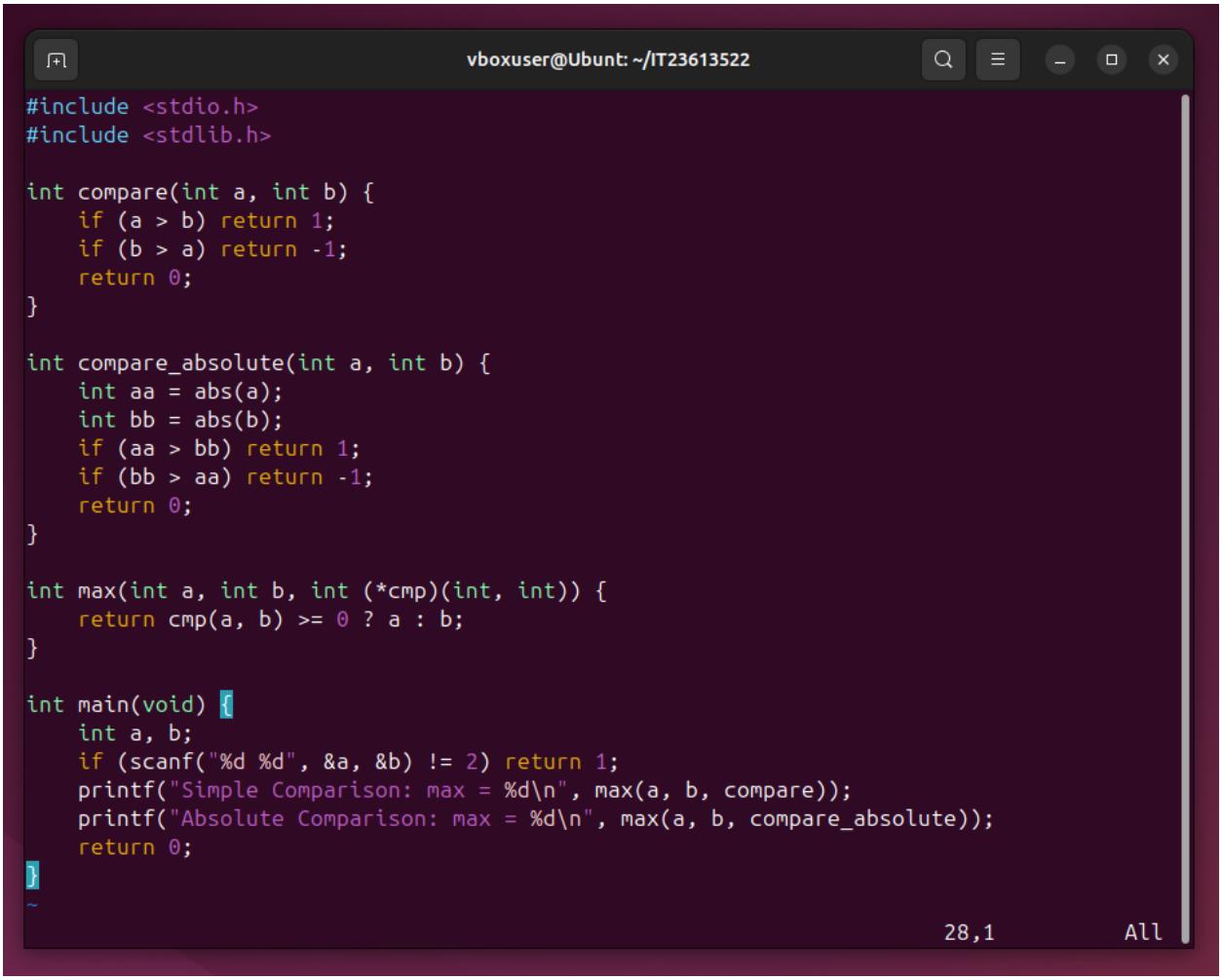


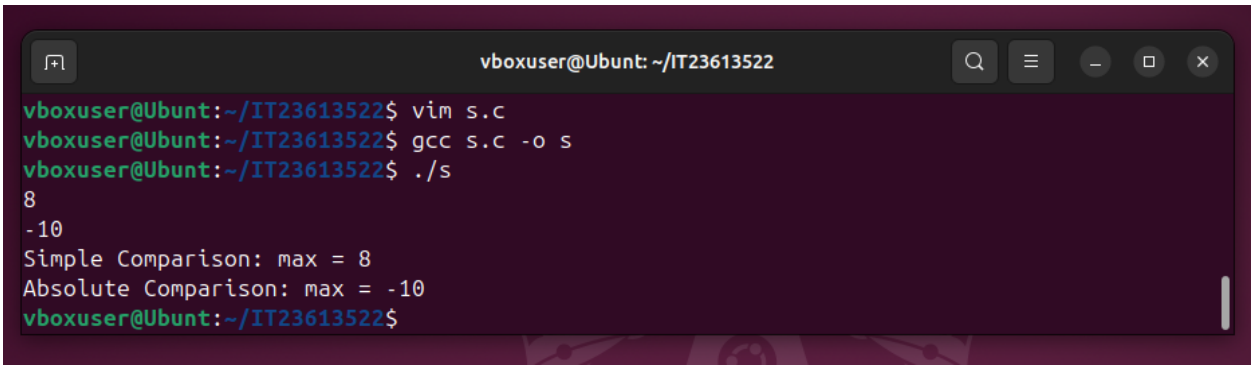
4. Swapping Values Using Pointers





5. Using Function Pointers for Flexible Comparisons





6. Simplifying a Fraction Using Output Parameters

vboxuser@Ubunt: ~/IT23613522

```c
#include <stdio.h>
int gcd(int a, int b) {
    if (a < 0) a = -a;
    if (b < 0) b = -b;
    while (b) {
        int t = a % b;
        a = b;
        b = t;}
    return a;}
void simplify_fraction(int *numerator, int *denominator) {
    if (*denominator == 0) {
        printf("Invalid denominator\n");
        return;}
    if (*numerator == 0) {
        *denominator = 1;
        return;}
    int g = gcd(*numerator, *denominator);
    *numerator /= g;
    *denominator /= g;
    if (*denominator < 0) {
        *denominator = -(*denominator);
        *numerator = -(*numerator);}}
int main(void) {
    int numerator, denominator;
    printf("Enter numerator and denominator: ");
    if (scanf("%d %d", &numerator, &denominator) != 2) return 1;
    simplify_fraction(&numerator, &denominator);
    printf("Simplified Fraction: %d/%d\n", numerator, denominator);
    return 0;
}
~
~
~
-- INSERT --                                                    1,15          All
```

vboxuser@Ubunt: ~/IT23613522

```
vboxuser@Ubunt:~/IT23613522$ gcc s.c -o s
vboxuser@Ubunt:~/IT23613522$ ./s
Enter numerator and denominator: 8
12
Simplified Fraction: 2/3
vboxuser@Ubunt:~/IT23613522$
```