

Assignment Chapter 4

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6.

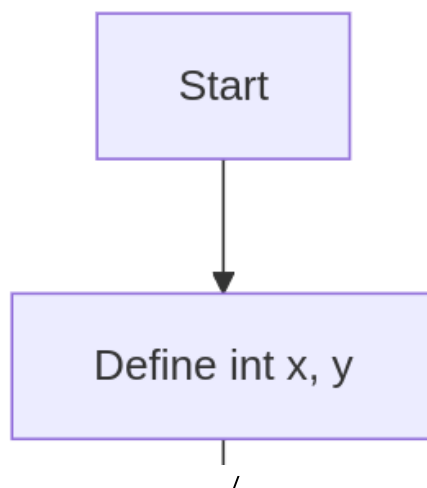
```
#include<stdio.h>

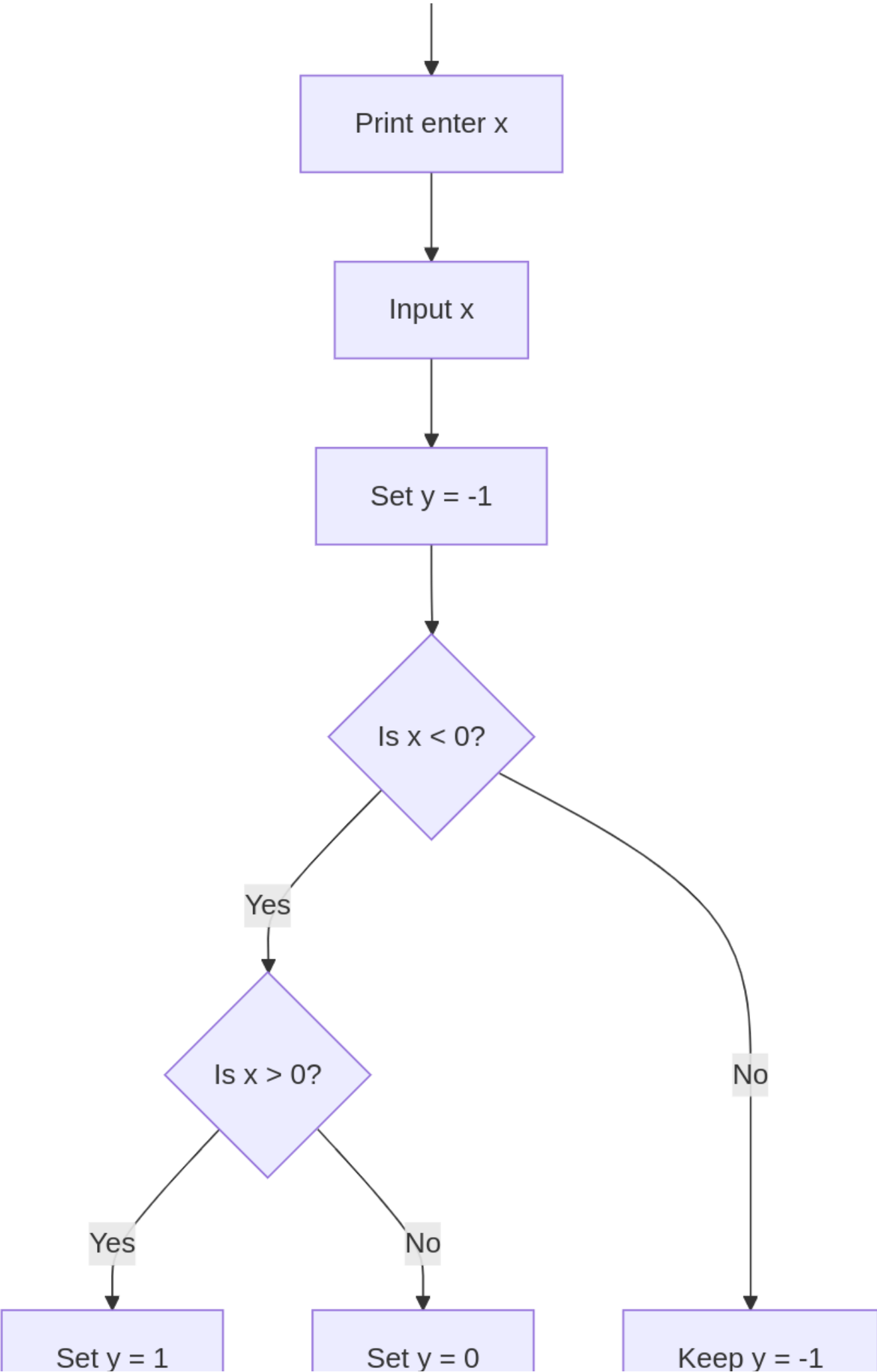
int main(){
    float x, y;
    printf("Enter the value of x: ");
    scanf("%f", &x);

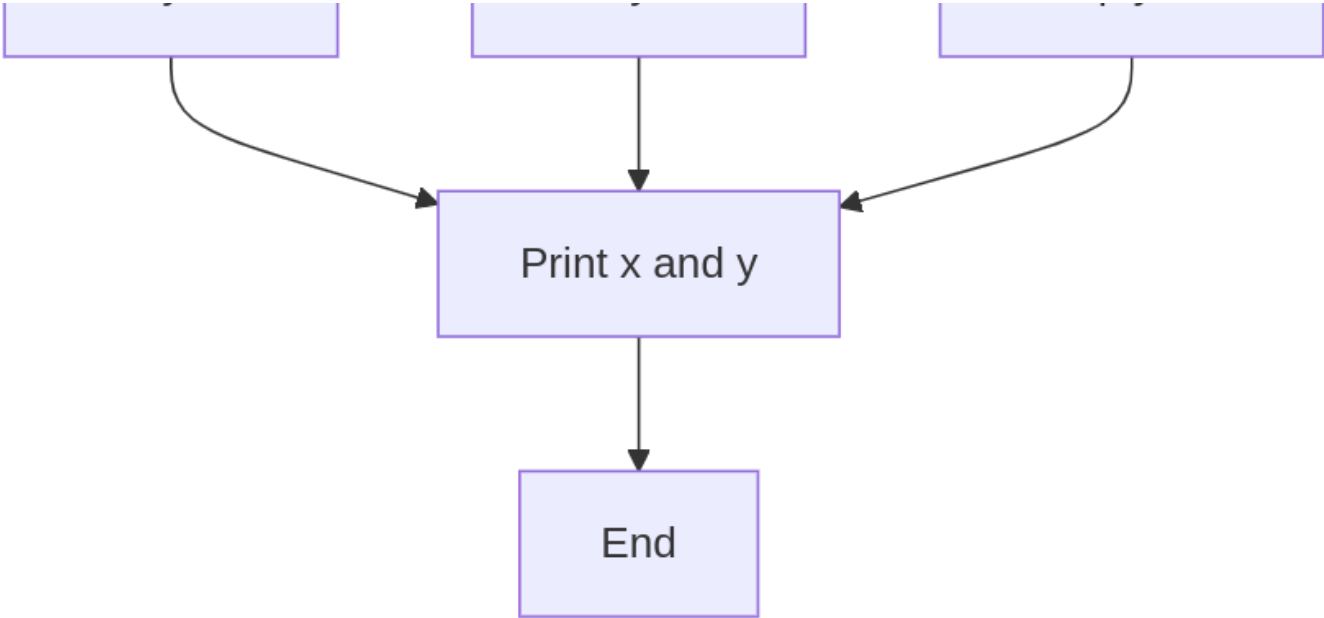
    if(x < 1){
        y = x;
    } else if (x >= 1 && x < 10){
        y = 2 * x - 1;
    }else{
        y = 3 * x - 11;
    }
    printf("y = %.2f\n", y);
    return 0;
}
```

```
$ Enter the value of x: 0.5
y = 0.50
$ Enter the value of x: 5
y = 9.00
$ Enter the value of x: 15
y = 34.00
```

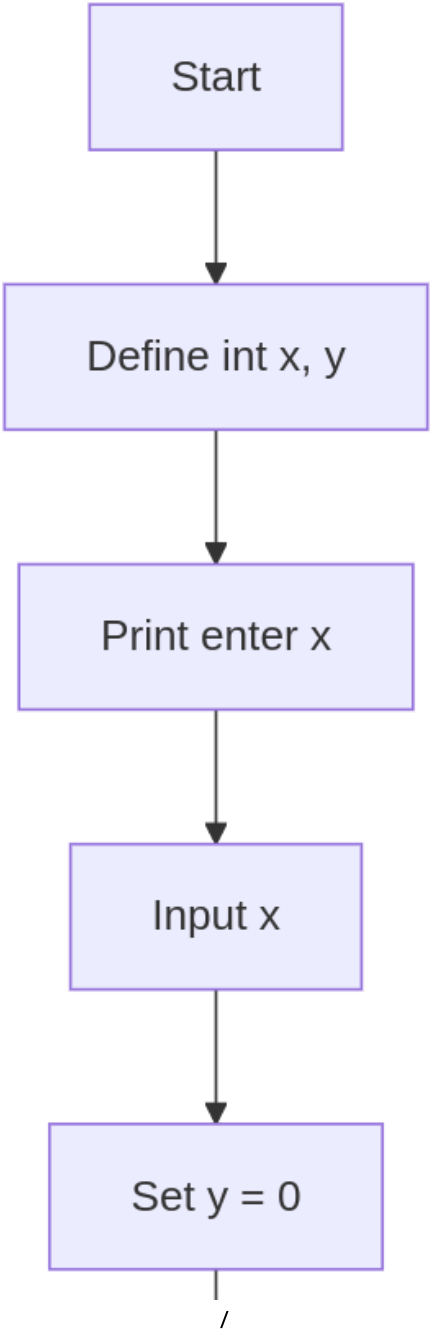
7. 程序1无法正确实现题目中的要求。它首先初始化变量 $y = -1$ ，如果 $x < 0$ ，进入第一个if语句。但是接着的条件 $\text{if}(x > 0)$ 永远为假，所以 y 保持为-1。如果 $x \geq 0$ ，则不会进入第一个if语句， y 依然保持为-1。所以无法满足条件。

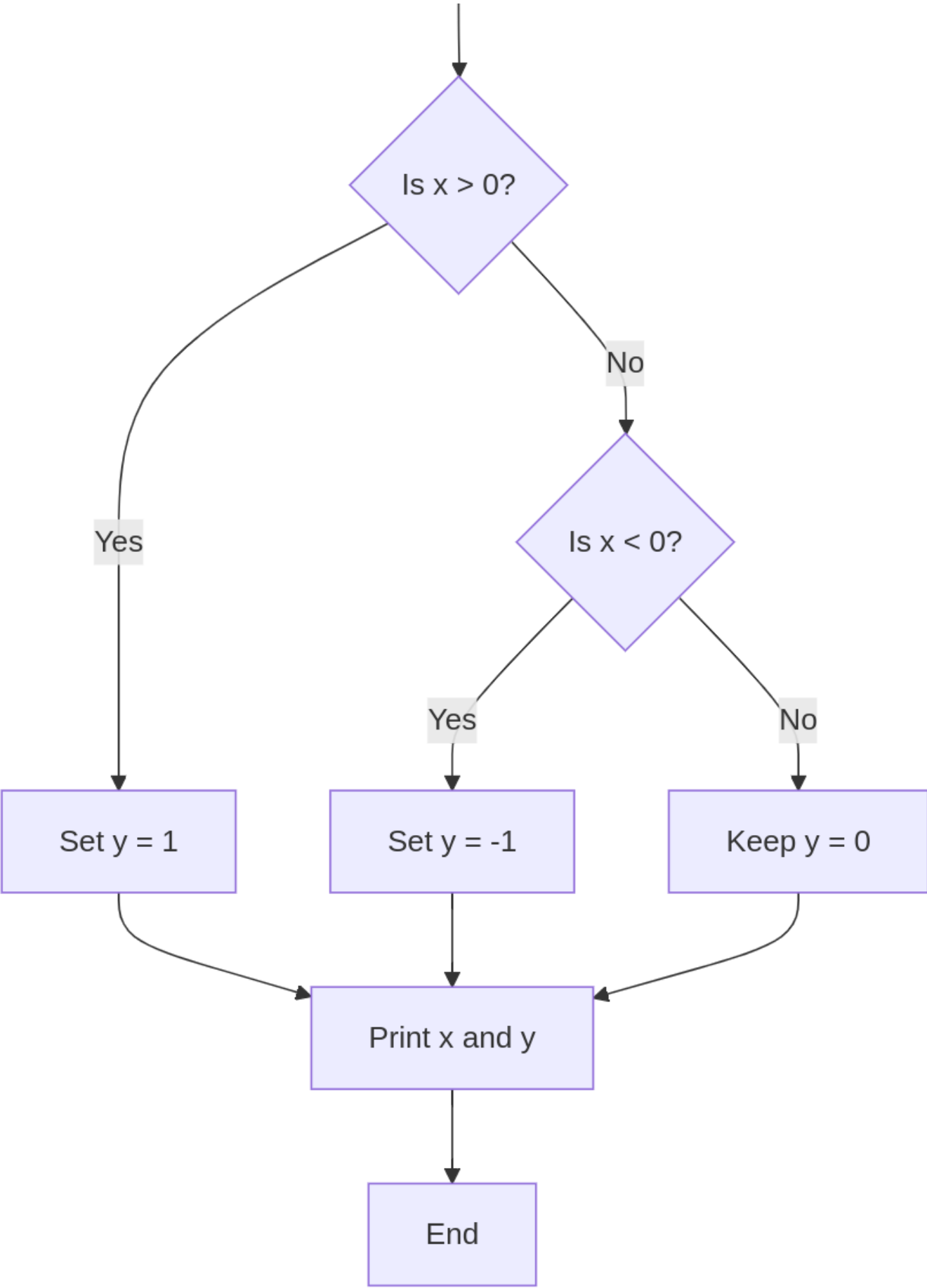






程序2可以满足题目要求。





```
#include <stdio.h>

void sort(int *a, int *b, int *c, int *d) {
    int temp;
    if (*a > *b) { temp = *a; *a = *b; *b = temp; }
    if (*b > *c) { temp = *b; *b = *c; *c = temp; }
    if (*c > *d) { temp = *c; *c = *d; *d = temp; }
    if (*a > *b) { temp = *a; *a = *b; *b = temp; }
    if (*b > *c) { temp = *b; *b = *c; *c = temp; }
    if (*a > *b) { temp = *a; *a = *b; *b = temp; }
}

int main() {
    int a, b, c, d;

    printf("Enter 4 numbers: ");
    scanf("%d %d %d %d", &a, &b, &c, &d);

    sort(&a, &b, &c, &d);

    printf("The numbers in ascending order are: %d %d %d %d\n", a, b, c,
d);
    return 0;
}
```

```
$ Enter 4 numbers: 5 2 6 9
The numbers in ascending order are: 2 5 6 9
```

12.

```
int main(){
    float x, y;
    float x1 = 2, y1 = 2, x2 = -2, y2 = 2, x3 = -2, y3 = -2, x4 = 2, y4 =
-2;
    float r = 1;
    float h = 0;

    printf("Enter (x, y) respectively: ");
    scanf("%f %f", &x, &y);

    if((x - x1) * (x - x1) + (y - y1) * (y - y1) <= r * r){
        h = 10;
    }else{
        h = 0;
    }
    printf("h = %.2f m\n", h);
}
```

```
$ Enter (x, y) respectively: 1 1  
h = 0.00 m  
$ Enter (x, y) respectively: 2 2  
h = 10.00 m
```