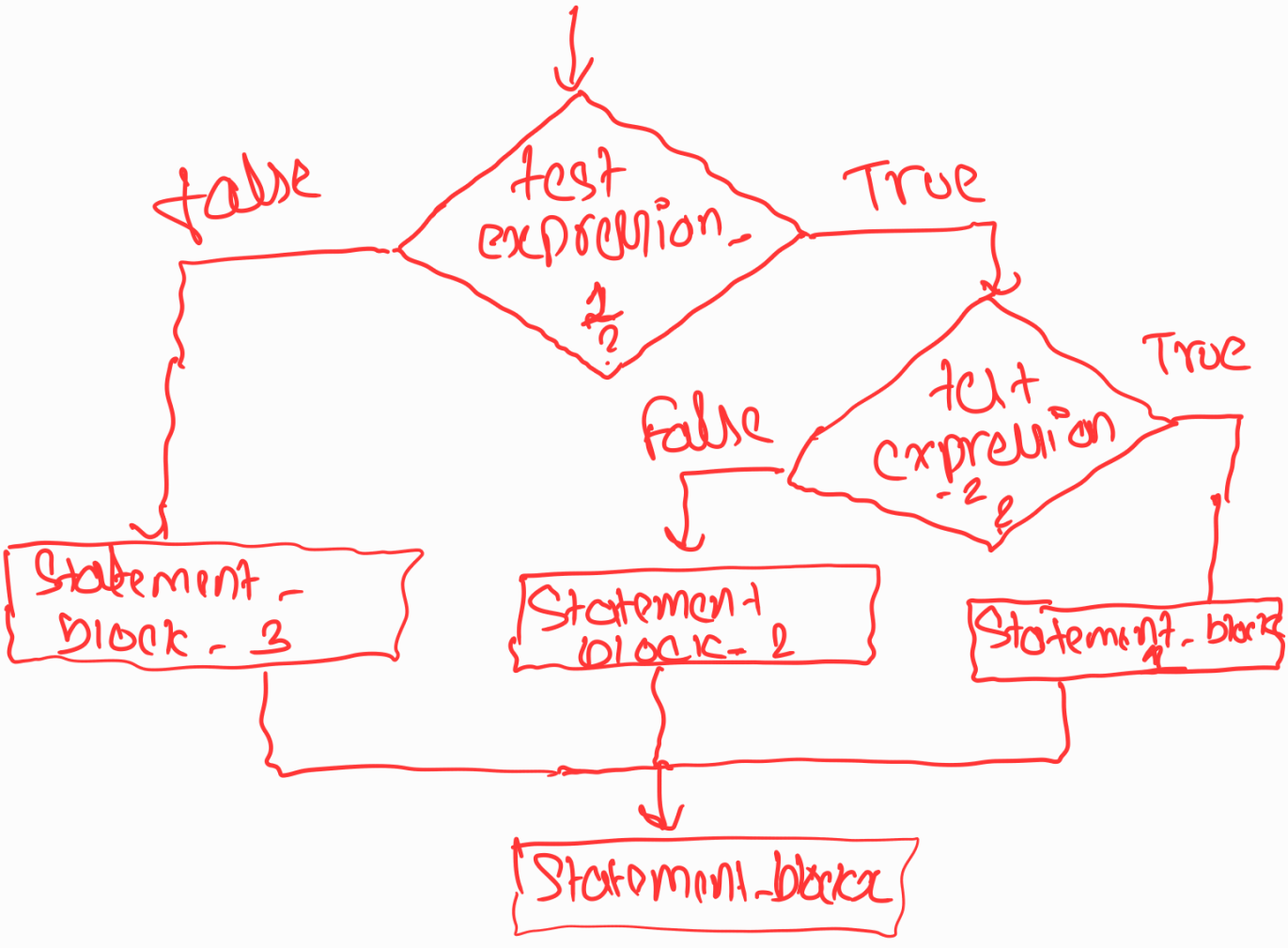
(3) nested if.... else statement.

Syntax:-

```
if (test expression-1)
{
    if (test expression-2)
    {
        Statement block_1;
    }
    else
    {
        Statement block_2;
    }
}
else
{
    Statement_
        block_3;
}
```


test expression-1
false
True
test expression-2
False
True
Statement-block-3
Statement-block-2
Statement-block-1
Statement-blocks

(#) WAP to print the largest among the three numbers.

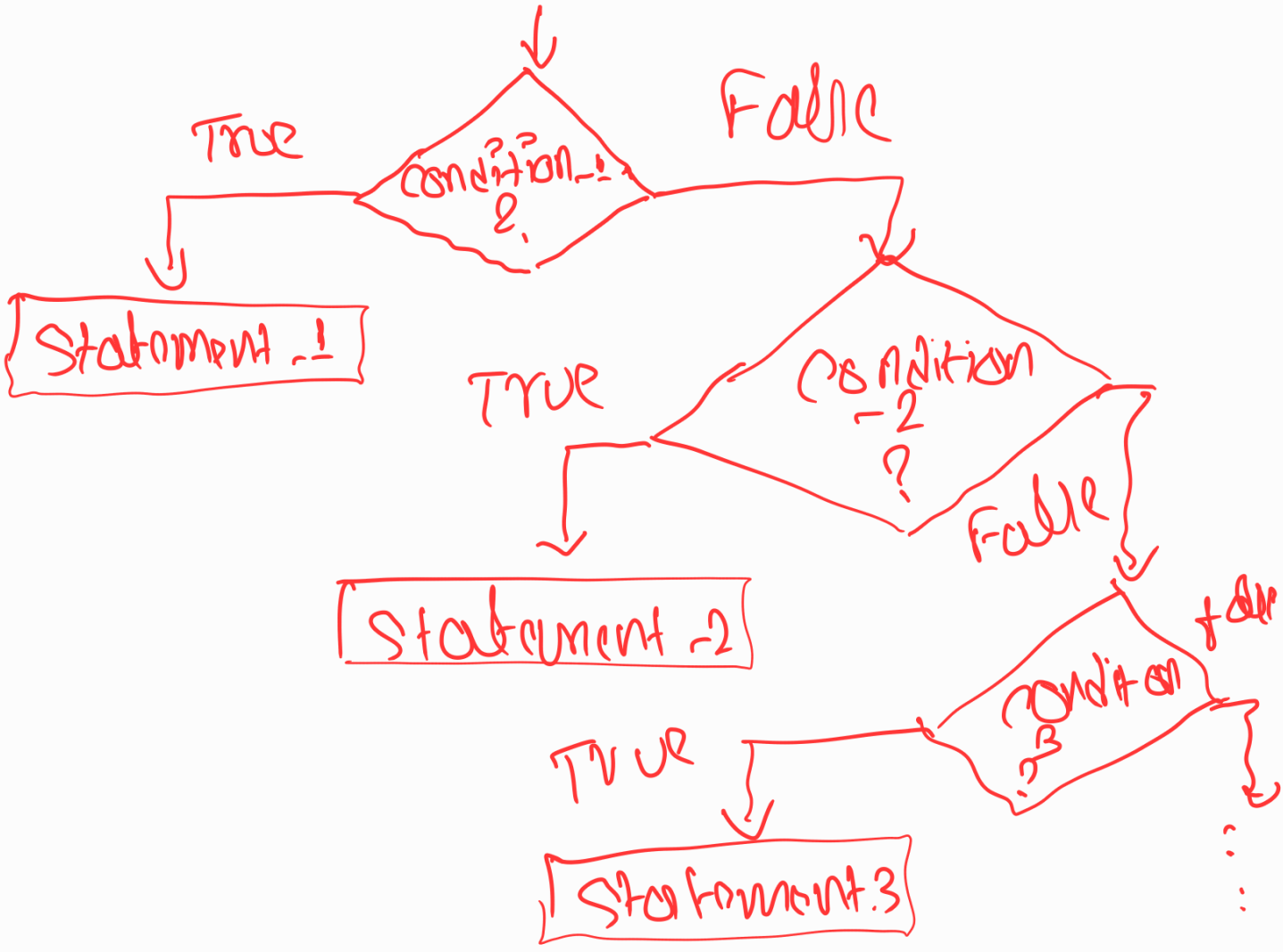
```
#include<stdio.h>
int main()
{
    int a,b,c;
    Printf("Enter three numbers");
    Scanf("%d%d%d",&a,&b,&c);
    if(a>b)
    {
        if(a>c)
        {
            Printf("%d is largest",
                a);
        }
        else
        {
            print f("%d is largest",
                c);
        }
}
```

```
else                                    // b>a
{
    if(b>c)
    {
        printf("%d is
                largest", b);
    }
    else
    {
        printf("%d is
                largest", c);
    }
}
return 0;
}
```

④ else...if Ladder

Syntax:-

```
if (condition-1)
{
  statement-1;
}
else if (condition-2)
{
  statement-2;
}
else if (condition-3)
{
  statement-3;
}
else
{
  statement-4;
}
Statement-x;
```



Q. WAP to calculate Roots of quadratic equation.

a, b, c

Discriminant = $b^2 - 4ac$

if $d = 0$

$r1 = r2 = \frac{-b}{2a}$

else if $d > 0$

$r1 = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$

$$r2 = \frac{-b - \sqrt{b^2 - 4ac}}{2a}$$

else

$$realpart = \frac{-b}{2a}$$

$$imgpart = \frac{\sqrt{-(d)}}{2a}$$

$$realpart \pm imgpart\, i$$