



Fundamental Coding with C

Flow control
“if statement”



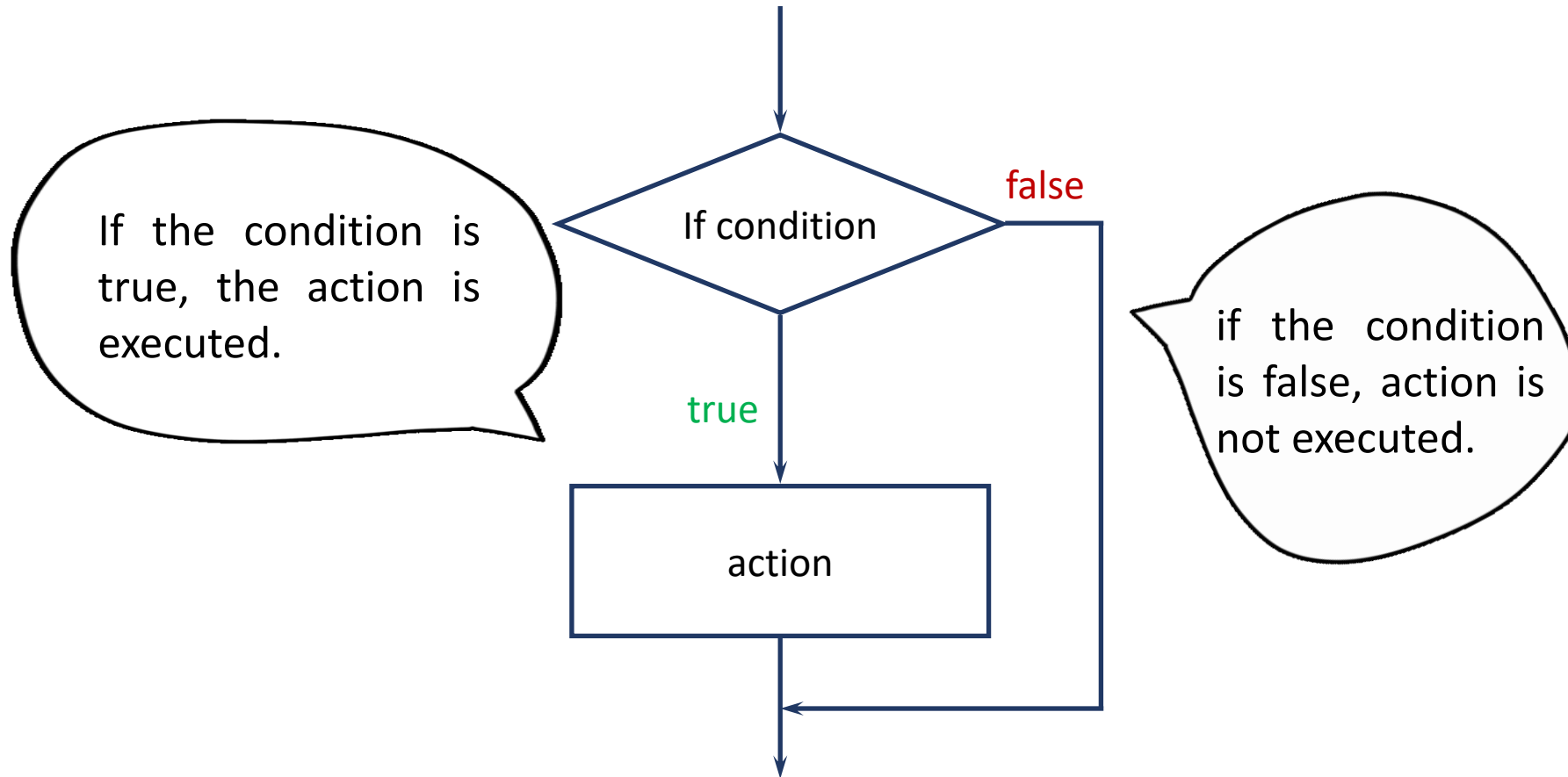
Flow control: “if statement”

- A conditional statement allows us to control whether a program segment is executed or not, this is named flow control.
- There are three basic Flow controls:
 - If
 - If else
 - If else if



Flow control: “if statement”

- **if**: If the condition is true, the action is executed. If the condition is false, action is not executed.





Flow control: “if statement”

- **if**: The syntax of an **if...** statement in C programming language is:

```
if(boolean_expression) {  
    /* statement(s) will execute if the boolean expression is true */  
}
```

- An example of a Boolean expressions are Relational Operators, Logical Operators, etc..

Relational

< <= >= >
 == !=
 =

Logical

&& ||
 !



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It's time to try

<https://repl.it/languages/c>





Flow control: “if statement”

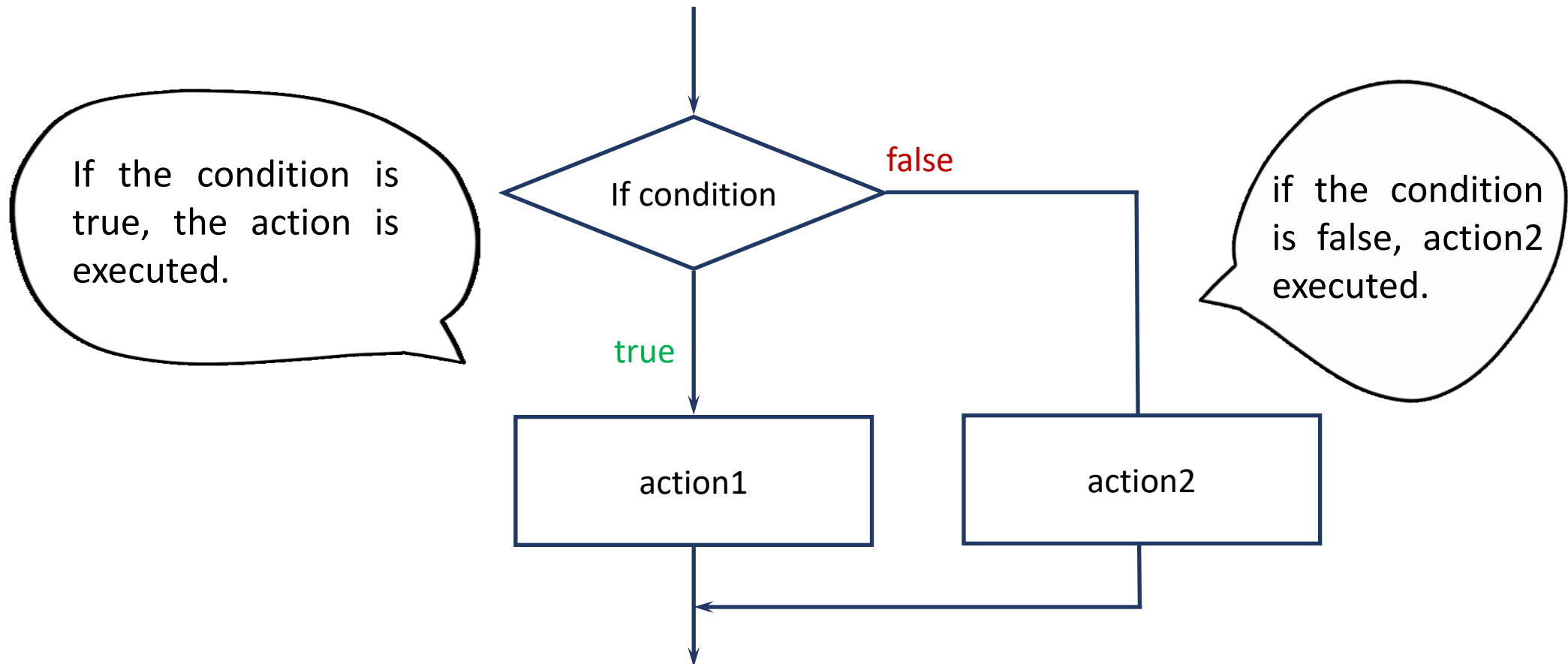
```
#include <stdio.h>

int main(void) {
    /* local variable definition */
    int a = 100;
    /* check the boolean condition */
    if( a < 20 ) {
        /* if condition is true then print the
        following */
        printf("a is less than 20\n" );
    }
    return 0;
}
```



Flow control: “if statement”

- **If else:** If the condition is true, the action1 is executed. If the condition is false, action2 is executed.





Flow control: “if statement”

- **If else** : The syntax of an **if...else...** statement in C programming language is:

```
if(boolean_expression) {  
    /* statement(s) will execute if the boolean expression is true */  
} else {  
    /* statement(s) will execute if the boolean expression is false */  
}
```




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Flow control: “if statement”

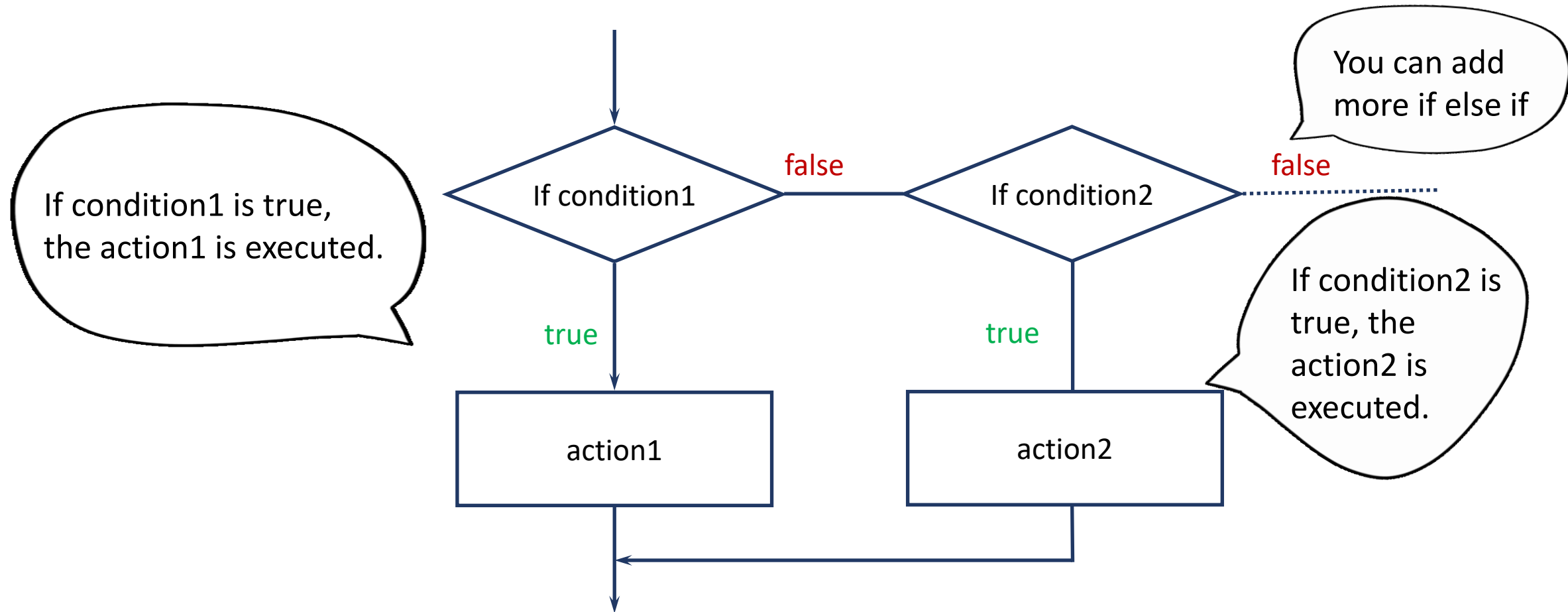
```
#include <stdio.h>
int main () {

    /* local variable definition */
    int a = 100;
    /* check the boolean condition */
    if( a < 20 ) {
        /* if condition is true then print the
        following */
        printf("a is less than 20\n" );
    } else {
        /* if condition is false then print the
        following */
        printf("a is not less than 20\n" );
    }
    printf("value of a is : %d\n", a);
    return 0;
}
```



Flow control: “if statement”

- **If else if:** If the condition is true, the action1 is executed. If the condition is false, another if is evaluated.





Flow control: “if statement”

- **If else if:** The syntax of an **if...else if...** statement in C programming language is:

```
if(boolean_expression 1) {  
    /* Executes when the boolean expression 1 is true */  
}  
else if( boolean_expression 2) {  
    /* Executes when the boolean expression 2 is true */  
    ...  
}  
else if( boolean_expression x) {  
    /* Executes when the boolean expression x is true */  
}  
else {  
    /* executes when the none of the above condition is true */  
}
```



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Flow control: “if statement”

```
#include <stdio.h>
int main () {
int a = 20;
/* check the boolean condition */
if( a == 10 ) {
/* if condition is true then print the following */
printf("Value of a is 10\n" );
} else if( a == 20 ) {
/* if else if condition is true */
printf("Value of a is 20\n" );
} else if( a == 30 ) {
/* if else if condition is true */
printf("Value of a is 30\n" );
} else {
/* if none of the conditions is true */
printf("None of the values is matching\n" );
}
printf("Exact value of a is: %d\n", a );
return 0;
}
```