

IF...ELSIF...ELSE...ENDIF STATEMENTS

http://www.tutorialspoint.com/euphoria/euphoria_if_statement.htm

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The if Statement

An **if** statement consists of a boolean expression followed by one or more statements.

Syntax

The syntax of an if statement is –

```
if expression then
  -- Statements will execute if the expression is true
end if
```

If the boolean expression evaluates to true then the block of code inside the if statement will be executed. If not the first set of code after the end of the if statement will be executed.

Example

```
#!/home/euphoria-4.0b2/bin/eui

integer a = 10
integer b = 20

if (a + b) < 40 then
  printf(1, "%s\n", {"This is true if statement!"})
end if

if (a + b) > 40 then
  printf(1, "%s\n", {"This is not true if statement!"})
end if
```

This would produce following result –

```
This is true if statement!
```

The if...else Statement

An **if** statement can be followed by an optional **else** statement, which executes when the boolean expression is false.

Syntax

The syntax of an if...else statement is –

```
if expression then
  -- Statements will execute if the expression is true
else
  -- Statements will execute if the expression is false
end if
```

Example

```
#!/home/euphoria-4.0b2/bin/eui

integer a = 10
integer b = 20

if (a + b) < 40 then
  printf(1, "%s\n", {"This is inside if statement!"})
else
```

```
printf(1, "%s\n", {"This is inside else statement!"})
end if
```

This would produce following result –

```
This is inside if statement!
```

The if...elsif...else Statement

An **if** statement can be followed by any number of optional **elsif...else** statement, which is very useful to test various conditions using single if...elsif statement.

Syntax:

The syntax of an if...elsif...else statement is –

```
if expression1 then
  -- Executes when the Boolean expression 1 is true
elsif expression2 then
  -- Executes when the Boolean expression 2 is true
elsif expression3 then
  -- Executes when the Boolean expression 3 is true
else
  -- Executes when none of the above condition is true.
end if
```

Example

```
#!/home/euphoria-4.0b2/bin/eui

integer a = 10
integer b = 20

if (a + b) = 40 then
  printf(1, "Value of (a + b ) is %d\n", a + b )
elsif (a + b) = 45 then
  printf(1, "Value of (a + b ) is %d\n", a + b )
elsif (a + b) = 30 then
  printf(1, "Value of (a + b ) is %d\n", a + b )
else
  printf(1, "Value of (a + b ) is %d\n", 0 )
end if
```

This would produce following result –

```
Value of (a + b ) is 30
```

The if...label...then Statement

An **if** statement can have a label clause just before the first **then** keyword. Note that an **elsif** clause can not have a label.

An if label is used just to name the if block and label names must be double quoted constant strings having single or multiple words. The label keyword is a case sensitive and should be written as **label**.

Syntax

The syntax of label clause is –

```
if expression label "Label Name" then
  -- Executes when the boolean expression is true
end if
```

Example

```
#!/home/euphoria-4.0b2/bin/eui

integer a = 10
integer b = 20

if (a + b) = 40 label "First IF Block" then
    printf(1, "Value of (a + b ) is %d\n", a + b )
elseif (a + b) = 45 then
    printf(1, "Value of (a + b ) is %d\n", a + b )
elseif (a + b) = 30 then
    printf(1, "Value of (a + b ) is %d\n", a + b )
else
    printf(1, "Value of (a + b ) is %d\n", 0 )
end if
```

This would produce following result –

```
Value of (a + b ) is 30
```

Nested if...else Statement

It is always legal to nest **if-else** statements. This means you can have one if-else statement within another if-else statements.

Syntax

The syntax of nested if...else is –

```
if expression1 then
    -- Executes when the boolean expression1 is true
    if expression2 then
        -- Executes when the boolean expression2 is true
    end if
end if
```

Example

```
#!/home/euphoria-4.0b2/bin/eui

integer a = 10
integer b = 20
integer c = 0

if c = 0 then
    printf(1, "Value of c is equal to %d\n", 0 )
    if (a + b) = 30 then
        printf(1, "Value of (a + b ) is equal to %d\n", 30)
    else
        printf(1, "Value of (a + b ) is equal to %d\n", a + b )
    end if
else
    printf(1, "Value of c is equal to %d\n", c )
end if
```

This would produce following result –

```
Value of c is equal to 0
Value of (a + b ) is equal to 30
```