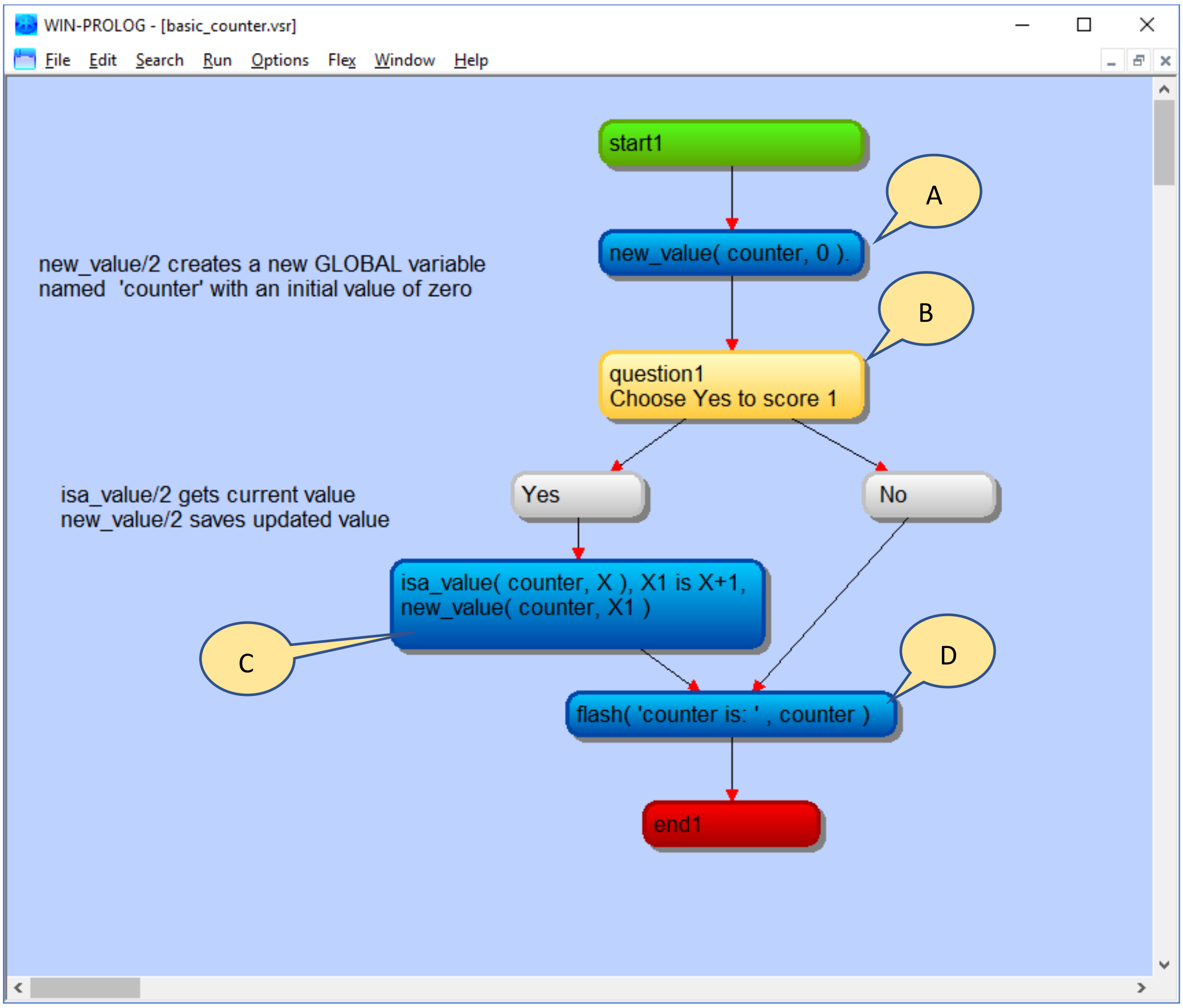
Basic Counter


WIN-PROLOG - [basic_counter.vsr]
File Edit Search Run Options Flex Window Help
start1
A
B
question1
Choose Yes to score 1
Yes
No
C
D
end1

new_value(counter, 0).

new_value/2 creates a new GLOBAL variable named 'counter' with an initial value of zero

isa_value/2 gets current value
new_value/2 saves updated value

isa_value(counter, X), X1 is X+1,
new_value(counter, X1)

flash('counter is: ' , counter)

Basic Counter example

- 1 single choice question
- 2 expressions
- 3 code boxes
- 1 conclusion

This example shows how to use Global Variables to maintain a counter using Flex utility routines.

A] code box

This use new_value/2 to establish a new global variable.

```
new_value( counter, 0 )
```

Sets the value of the global variable, `counter`, to 0

B] question1

This is a single choice question which has 2 expressions – Yes and No

C] code box

This updates the global variable by first picking up the current value using isa_value/2, then adding 1 to it and then updating the stored value using new_value/2.

```
isa_value( counter, X ), X1 is X+1,
new_value( counter, X1 )
```

`isa_value/2, new_value/2` are Flex predicates

`isa_value( counter, X )` retrieves the current value stored in the global variable, counter, and places it in the logical variable X (which can be updated easily by Prolog)

is/2 is Prolog's mathematical expression evaluator whereby the left hand side is 'bound' to the computed value created by evaluating the RHS

`X1 is X+1` assigns to the logical variable X1 the result of adding 1 to X

X and X1 are local logical variables whose scope is this piece of code in the statement box

X is used to retrieve the current value of the counter and pass it into the arithmetic expression
X1 is used to store the computed value and pass it into the new value storage call

`new_value( counter, X1 )` copies the value from X1 into the global variable, counter

D] code box

This uses flash to display the current value of the global variable named 'counter'

```
flash( 'counter is: ' , counter )
```

flash/2 here has 2 arguments; the first is static text and the second is the name of a global variable, counter. flash/? will replace this with the actual value of this variable.