ordinary question

computed question

question name (variable)

expected type of answer

label shown to user

expression of computation

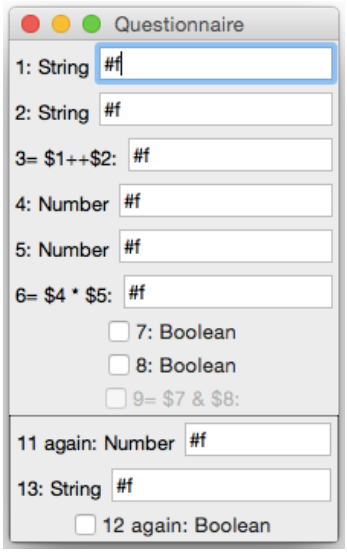
```
(Form (?? 'q1 "1: String" String)
      (?? 'q2 "2: String" String)
      (~? 'q3 "3= $1++$2:" (~~ string-append (~> 'q1) (~> 'q2)))
      (?? 'q4 "4: Number" Number)
      (?? 'q5 "5: Number" Number)
      (~? 'q6 "6= $4 * $5:" (~~ * (~> 'q4) (~> 'q5)))
      (?? 'q7 "7: Boolean" Boolean)
      (?? 'q8 "8: Boolean" Boolean)
      (~? 'q9 "9= $7 && $8:" (~~ && (~> 'q7) (~> 'q8)))
      (If (~> 'q9)
          (?? 'q10 "10: Number" Number)
          (~? 'q11 "11= $6 - $10:" (~~ - (~> 'q6) (~> 'q10))))
      (If (~! #t)
          (?? 'q11 "11 again: Number" Number)
          (If (~~ > (~> 'q11) (~! 9))
              (?? 'q12 "12: Boolean" Boolean))
          (?? 'q13 "13: String" String)
          (?? 'q12 "12 again: Boolean" Boolean)))
```

first group

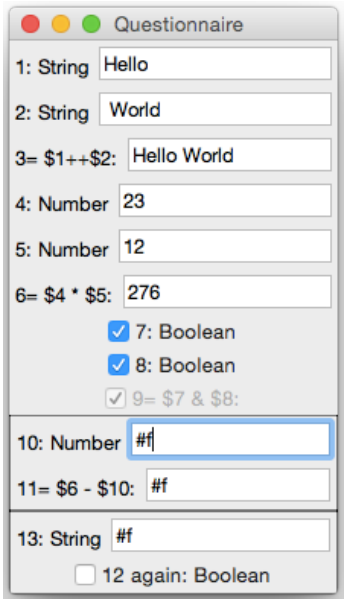
nested group of second group

second group

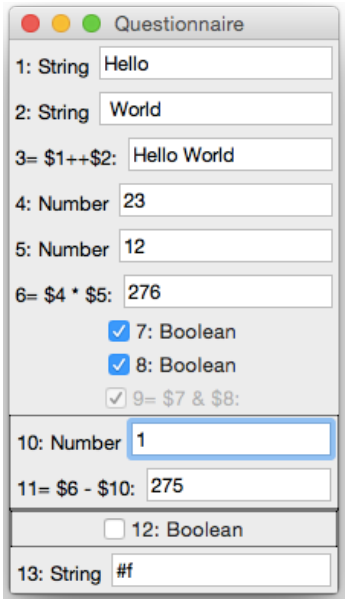
**(a)** questionnaire source code



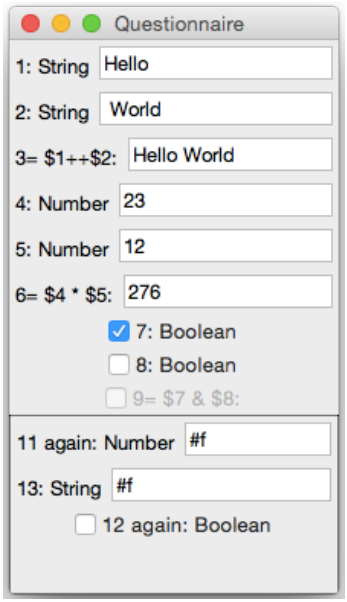

**(b)** original GUI, without user input (all values undefined), first and nested group of second group not shown (question 9 & 11 are undefined), the second group is always shown (constant *true*)




**(c)** after answering questions 1—8, first group shown (computed question 9 evaluates to *true*) shadowing the original question 11 with its computed version




**(d)** after answering questions 10, question 11 is defined; its value is > *9* such that the nested group is shown and its question 12 shadows the original version




**(e)** deselecting question 8 deactivates the first group, such that the original question 11 &12 are active again