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# Übergeneric Edit Checks

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# Übergeneric Edit Checks

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## Problems we wanted to solve

- Repetition: Edit checks copied into multiple studies
- Inefficiency: Multiple edit checks written and applied where one edit check would do
- Subpar documentation: Confusion about what the edit check does and how it does it
- Too many opinions: Edit checks copied and re-written to reflect personal/client wording preferences

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A simple non-generic example:

```
edit RequirePTID() {  
    message = " Patient ID is a required field, but currently  
    it is blank.";  
    if (dfblank(@T)){  
        dfaddqc(@T, 1, message, 1, 2, "");}  
}
```

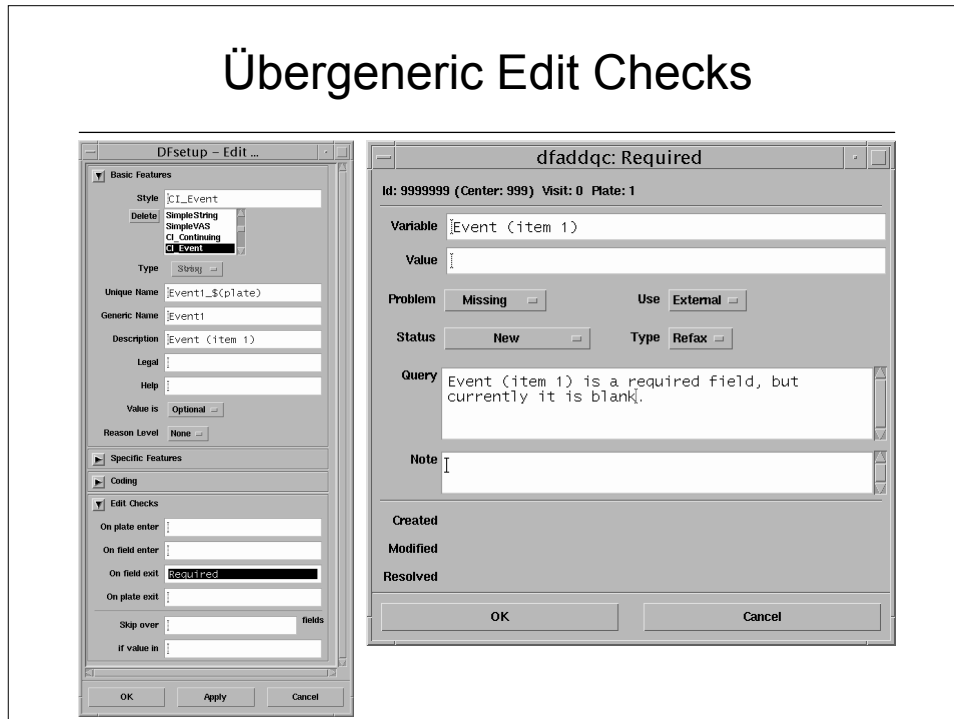
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A simple generic example:

```
edit Required() {  
    message = dfvarinfo(@T, DFVAR_DESC)  
    + "is a required field, but currently it is blank.";  
    if (dfblank(@T)){  
        dfaddqc(@T, 1, message, 1, 2, "");}  
}
```

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How do you turn a Generic Edit Check into  
an Übergeneric Edit Check?

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### Cover the Most Frequently Needed Edit Checks

- Variable B is required/not required if VariableA=X, !=X, is blank, is not blank, >X, <X, >=X, <=X
- Variable B must equal/not equal a specific value if VariableA=X, !=X, is blank, is not blank, >X, <X, >+X, <=X
- DateA must be before/after/equal to DateB
- If CheckboxA is marked, nothing else should be completed
- If CheckboxA is not marked, something else must be completed

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### Add Conditional Text Based Upon Variable Type

- If variable is a check box, pull specific text into the QC message so that it does not read "VariableA is marked 0", but instead reads "VariableA is blank".
- Similarly, if variable is a choice box, pull the variable label into the QC message so that it does not read "VariableA is marked 2", but instead reads "VariableA is marked Female".

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### Add/Delete Variable Information in QC message

- If using an edit check across plates, include information about the plate number, variable description, and current value of the cross-plate variable
- To avoid confusion, *remove* some text, such as item number, in the variable description of the cross-plate variable

“Inclusion Criteria #1 (INC) indicates that the subject is Female, however, Pregnancy Test Result (item 2) is not marked.”

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### Allow use of unique name, generic name, field number, or +/-field position

- DateWithin(-3,0,9999)
- DateWithin(18,0,9999)
- DateWithin(“ConsentDt”,0,9999)
- DateWithin(“ConsentDt\_001”,0,9999)
- DateWithin(“ConsentDt[,0,001]”,0,9999)

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### Make Use of Functions for Repetitive Tasks

- GetDesc: fetch the variable description
- GetLabel: fetch the coded choice/check label
- GetValue: fetch the current value of the specified variable
- GetPlate: fetch the plate number on which the specified variable resides
- Condense: remove item numbering text from the variable description
- Chop: remove the carriage return from the end of function result

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### Offer Choice of Wording in QC Message

Include options for QC message text to accommodate (to a limited extent) personal/client preferences

If (VERBOSE) message = "Because Sex is marked Female, Pregnancy Test Result is a required field, but currently it is blank. Please complete, then initial, date, and re-fax the CRF.";

If (TERSE) message = "Pregnancy Test Result is a required field.";

If (FRENCH) message = «Le résultat du test de grossesse est un champ voulu.»;



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### Notes of Caution

- Multi-function, cross-plate edit checks take a long time to run in batch
- More than three arguments is approaching too many
  - next step, an Über-Über generic that does everything, with a natural language parser to replace arguments (Skynet Project)
- Custom, external UNIX code may be necessary
  - `return(dfrun("/bin/echo " + field + "|/bin/sed 's/ (.*)/|'/bin/sed 's/^[0-9]*[a-z]*[A-Z]*\.\. //|/bin/perl -p -e 'chop'"));`
- It takes a long time to write and fully validate a complex Übergeneric

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### Results

- Two dozen edit checks that cover 95% of our edit check needs
- Edit checks that compare data across plates and even across studies
- Faster study setup, testing, and validation
- Happy programmers Ü

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Contact DF/Net Research if you'd like examples  
of Übergeneric Edit Checks

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