



```

name: master
log: c:\hidrive\o7\Stata GUGM-2021-06\logs/example do-file.smcl
log type: smcl
opened on: 20 Jul 2021, 09:01:52

```

```

1 .
2 .
3 .
4 . **# HEADER
5 . **=====
6 . type ./header.txt
/*=====

file:      example {do|ini|xlsx}-file.do
author:    Sven O. Spieß, sven[dot]spiess[at]dpc-software[dot]de
date:      25jun2021
version: 1

project:   example working w/ external configurations in Stata,
           German Stata Conference '21

description:
demonstration of using external configuratrions in .do-, .ini-, & .xlsx-files
with example of grading fictitious single-choice exam data

external dependencies:
-none-

changelog:
=====
n/a

           legend: ! = fixed; + = added; * = changed; - = removed
=====*/

7 .
8 .
9 .
10.
11.
12. **#1. Load Settings (from .do)
13. **=====
14. do ./config/settings

15. // settings for grading of fictitious single-choice exam data
16. // German Stata Conference, 25jun2021, Sven O. Spieß (sven[dot]spiess[at]dpc-software[dot]de)
17.
18.
19.
20.
21. **#General:
22. *=====
23. global title          = "Introduction to Drama"

```

```
24. global term          = "spring21"
25. global shorttitle    = "shakespeare-101"
26.
27. global bar_color     = "emerald"
28. global text_color    = "sienna"
29.
30.
31.
32.
33. **#Input/Output:
34. *=====
35. global rawdata        = "./data/exam shakespeare-101 2021.dta"
36. global gradeslist     = "./results/grades \${shorttitle} \${term}.xlsx"
37.
38.
39.
40.
41. **#Correct Solutions:
42. *=====
43. global question_1     = "c"
44. global question_2     = "c"
45. global question_3     = "c"
46. global question_4     = "c"
47. global question_5     = "b"
48. global question_6     = "c"
49. global question_7     = "c"
50. global question_8     = "b"
51. global question_9     = "e"
52. global question_10    = "a"
53.
54.
55.
56.
57. **#Grading:
58. *=====
59. global question_ct     = 10
60. global question_pt     = 5
61.
62.
63. global grades          = "A B C D F"
64.
```

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65. global grading      = "percentages"          // change to 'points' as necessary
66. global percentages = "90  80  70  60  00"
67. *global points      = "37  24  ..."        // adjust as needed
68.
69.
70.
71. exit

    end of do-file

72.
73.
74.
75.
76.
77.
78.
79.
80. **#2. Compute Grades from Exam Data
81. *=====
82. macro list rawdata
    rawdata:      ./data/exam shakespeare-101 2021.dta

83. use "$rawdata", clear
    (made-up single-choice exam data)

84.
85.
86. do ./code/grading

87. // actual grading of fictitious single-choice exam data
88.
89.
90. **##2.1 Translate answers to points
91. **-----
92. forvalues i = 1/$question_ct {
    2.
93.         generate byte points_question_`i' = ///
    >         (question_`i' == "${question_`i'}") * $question_pt
    3. }

94.
95.
96.
97.
98. **##2.2 Totals & percentages
99. **-----
100 egen int total = rowtotal(points_question_*)

101
102
103 generate percent = total/($question_ct*$question_pt) * 100

104 format percent %6.2f

105
106
107

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108
109 **##2.3 Convert to grades
110 **-----
111
112 quietly: generate grade = ""

113
114
115 if "$grading" == "points" {
116     local criterion = "total"
117     local unit      = "pts."
118 }

119
120 else {
121     local criterion = "percent"
122     local unit      = "%"
123 }

124
125 local i = 1

126 foreach value of global $grading {
127     2.     local grade :word `i' of $grades
128     3.
129     display " {res}`value' {txt} `unit' -> grade: {res}`grade'"
130     4.
131     quietly: replace grade = "`grade'" if (`criterion' >= `value') & missing(gr
132 > ade)
133     5.
134     local ++i
135     6. }
136     90 % -> grade: A
137     80 % -> grade: B
138     70 % -> grade: C
139     60 % -> grade: D
140     00 % -> grade: F

130
131
132 assert !missing(grade) // check: each participant assigned a grade

133 exit

    end of do-file

134
135
136
137
138
139
140
141
142 **#3. Export Anonymous Grades List
143 *=====
144 label var ID          "Student ID"

145 label var total       "Total points"

```

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146 label var grade      "Overall grade"

147
148 export excel ID total grade using "$gradeslist", ///
    > firstrow(varlabels) replace
    file ./results/grades shakespeare-101 spring21.xlsx saved

149
150
151
152
153
154
155
156
157 **#4. Plot Grade Distribution
158 *=====
159 preserve

160     gen one = 1

161     collapse (count) freq=one , by(grade)

162
163     sum freq

```

Variable	Obs	Mean	Std. dev.	Min	Max
freq	5	3	1.224745	2	5

```

164
165     graph bar (asis) freq, over(grade, label(labcolor($text_color))) ///
    >     title(`"Grade Distribution {it:$title}"', color($text_color) span) ///
    >     ytitle("") ///
    >     ylabel(, angle(0) labcolor($text_color)) ///
    >     bar(1, color($bar_color)) ///
    >     blabel(bar, pos(inside) color(white)) ///
    >     caption("{it:N} = `r(sum)'"', color($text_color) position(5)) ///
    >     graphregion(color(white))

166
167     graph export "./results/barplot grades $shorttitle $term.svg", replace
    (file ./results/barplot grades shakespeare-101 spring21.svg not found)
    file ./results/barplot grades shakespeare-101 spring21.svg saved as SVG format

168 restore

169
170
171
172
173 *****
174 log close master
    name:  master
    log:   c:\hidrive\o7\Stata GUGM-2021-06\logs/example do-file.smcl
    log type: smcl
    closed on: 20 Jul 2021, 09:01:55

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