

Program Summary – Final project.sas~

Execution Environment

Author: ceceliang7@outlook.com
 File: /home/u45036707/124_Assignments/Final project.sas~
 SAS Platform: Linux LIN X64 3.10.0-1062.9.1.el7.x86_64
 SAS Host: ODAWS03-USW2.ODA.SAS.COM
 SAS Version: 9.04.01M6P11072018
 SAS Locale: en
 Submission Time: 6/15/2020, 11:06:46 AM
 Browser Host: 136.36.192.72
 User Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_13_6) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/83.0.4103.61 Safari/537.36
 Application Server: ODAMID02-USW2.ODA.SAS.COM

Code: Final project.sas~

```

/* Final Project */

*import the data;

options validvarname=v7;
/* creating the macro variable for both type A and B to cut my original code in half */
/* Using macro variable for type A and B to simplify the code */
%let type = A;

proc import datafile = "/home/u45036707/Assignment Files/Form&type..csv"
  out = Form&type
  dbms= csv
  replace;

run;

proc import datafile = "/home/u45036707/Assignment Files/Domains Form&type..csv"
  out = Domain&type
  dbms = csv
  replace;

run;

/* part 1 */
/* Creating a Table to display the form A whether the student get questions right or wrong. Score "1" is right, "0"
data result&type;
  set Form&type;

  array tests(150) $ Q1-Q150;
  array answerKey (*) $ K1-K150;

  Form = "&type";

  retain K1-K150;
  If Student = "&type.&type.&type.&type.KEY" then do i = 1 to 150;
    answerKey(i) = tests(i);

  end;
  else do Questions = 1 to 150;
    if answerKey(Questions) = tests(Questions) then Score = 1;
    else Score = 0;
    output;
  end;

  keep student Score Questions Form;
run;

/* Part 2 */
/* Merge the table with FormA and DomainA */
proc sql;
create table joined&type as
  select Form,student,result&type..Questions,Score,DomainNum
  from result&type inner join Domain&type
  on result&type..Questions = Domain&type..QuestionNum;
quit;

/* Part 3 */;

```

```

/* Combine the two tables for Forms A and B created in step 2; */
/* Convert Student type from char to numeric */
data table_combined;
    set joinedA joinedB;
    Students = input(Student,8.);
    drop Student;
    rename Students = Student;
run;

/* Part 4 */
/* Totalscore and percent for each student, and five domains */
proc means data = table_combined sum mean noprint;
    var Score;
    class Student DomainNum;
    id Form;
    output out = Score_mean (drop=_TYPE_ _FREQ_) mean=percentage sum=totalscore;
run;

/* proc print data=Score_mean; */
/* run; */

/* Part 5 */
/* sort the table by students */
proc sort data=Score_mean;
    by Student;
    where Student is not missing;
    format percentage 8.5;
run;

/* Part 6 */
data Students_combined;
    set Score_mean;

    array Score_domain(*) OP OS DP1 DS1 DP2 DS2 DP3 DS3 DP4 DS4 DP5 DS5;
    retain OP OS DP1 DS1 DP2 DS2 DP3 DS3 DP4 DS4 DP5 DS5;

    by Student;

    if first.Student then i = 0;
    i+1;
    Score_domain(i) = percentage;
    i+1;
    Score_domain(i) = totalscore;

    if last.Student then output;

    label OP = "Overall Percentage"
           OS = "Overall Score"
           DP1 = "Domain 1 Percentage"
           DS1 = "Domain 1 Score"
           DP2 = "Domain 2 Percentage"
           DS2 = "Domain 2 Score"
           DP3 = "Domain 3 Percentage"
           DS3 = "Domain 3 Score"
           DP4 = "Domain 4 Percentage"
           DS4 = "Domain 4 Score"
           DP5 = "Domain 5 Percentage"
           DS5 = "Domain 5 Score";
    drop i DomainNum percentage totalscore;
    format DP1-DS5 percent7.2 OP percent7.2;

run;

/* proc print data = Students_combined label; */
/* var Student Form OS OP DS1 DP1 DS2 DP2 DS3 DP3 DS4 DP4 DS5 DP5; */
/* */
/* run; */

/* Part 7 */
/* side-by-side boxplots of give domains using student percentages as the response */
title "Boxplots of Student Percentage for Five Domains";
proc sgplot data=Score_mean;
    vbox percentage/category=DomainNum;
    xaxis label="Domain";
    yaxis label="Student Percentage";
    format Student Percentage PERCENT8.1;
run;
title;

/* Part 8 */
/* Percentage correct for each question in separated form */

```

```

proc means data=table_combined mean nonobs noprint;
  var Score;
  class Form Questions;
  id Student;
  ways 2;
  output out = percentOnQuestions (drop= _TYPE_ _FREQ_) mean=QuestionPercent;

run;
/* */
/* title "Percent correct for each question"; */
/* proc print data=percentOnQuestions; */
/* var Form Questions QuestionPercent; */
/* format QuestionPercent 4.2; */
/* run; */
/* title; */

/* Part 9 */
/* create PDF file */
ods pdf file= "~/124 Assignments/Final_Project.pdf";
options nodate nonumber orientation=landscape;

/* Section A */
*Table sorted by studentID;
title "Section A - Student Scores";
title2 "Sorted by Student ID";
proc print data = Students_combined label noobs;
  var Student Form OS OP DS1 DS2 DS3 DS4 DS5 DP1 DP2 DP3 DP4 DP5;

run;
title;

*Table sorted by overall percentage;
proc sort data=Students_combined out= combined_sorted;
  by descending OS;
run;

title "Section A - Student Scores";
title2 "Sorted Highest to Lowest Overall Score";
proc print data=combined_sorted label noobs;
  var Student Form OP OS DP1 DP2 DP3 DP4 DP5 DS1 DS2 DS3 DS4 DS5;
run;
title;

*side-by-side boxplot;
title "Section A - Student Scores";
title2 "Boxplots of Student Percentage for Five Domains";
proc sgplot data=Score_mean;
  vbox percentage/category=DomainNum;
  xaxis label="Domain";
  yaxis label="Student Percentage";
  format Student Percentage PERCENT8.1;
run;
title;

/* Section B */
*table sorted by exam form then by question number;
title "Section B: Question Analysis";
title2 "Sorted by Exam Form and Question Number";
proc print data=percentOnQuestions noobs;
  var Form Questions QuestionPercent;
  format QuestionPercent percent8.1;
run;
title;

*table sorted by question percentage;
proc sort data=percentOnQuestions out=sorted_percentOnQuestions;
  by descending QuestionPercent;
  format QuestionPercent percent8.1;
run;

title "Section B: Question Analysis";
title2 "Sorted by Question Percentage";
proc print data = sorted_percentOnQuestions;
  var QuestionPercent Form Questions;
run;
title;

ods pdf close;

```

Log: Final project.sas~

Notes (58)

```

1      OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
NOTE: ODS statements in the SAS Studio environment may disable some output features.
71
72      /* Final Project */
73
74      *import the data;
75
76      options validvarname=v7;
77      /* creating the macro variable for both type A and B to cut my original code in half */
78      /* Using macro variable for type A and B to simplify the code */
79      %let type = A;
80      proc import datafile = "/home/u45036707/Assignment Files/Form&type..csv"
81      out = Form&type
82      dbms= csv
83      replace;
83      !
84      run;

```

NOTE: Unable to open parameter catalog: SASUSER.PARMS.PARMS.SLIST in update mode. Temporary parameter values will be saved to WORK.PARMS.PARMS.SLIST.

```

85      /*****
86      *   PRODUCT:   SAS
87      *   VERSION:   9.4
88      *   CREATOR:   External File Interface
89      *   DATE:      15JUN20
90      *   DESC:      Generated SAS Datastep Code
91      *   TEMPLATE SOURCE: (None Specified.)
92      *****/
93      data WORK.FORMA      ;
94      %let _EFIERR_ = 0; /* set the ERROR detection macro variable */
95      infile '/home/u45036707/Assignment Files/FormA.csv' delimiter = ',' MISOVER DSD lrecl=32767 firstobs=2 ;

```

```
96      informat Student $7. ;
97      informat Q1 $1. ;
98      informat Q2 $1. ;
99      informat Q3 $1. ;
100     informat Q4 $1. ;
101     informat Q5 $1. ;
102     informat Q6 $1. ;
103     informat Q7 $1. ;
104     informat Q8 $1. ;
105     informat Q9 $1. ;
106     informat Q10 $1. ;
107     informat Q11 $1. ;
108     informat Q12 $1. ;
109     informat Q13 $1. ;
110     informat Q14 $1. ;
111     informat Q15 $1. ;
112     informat Q16 $1. ;
113     informat Q17 $1. ;
114     informat Q18 $1. ;
115     informat Q19 $1. ;
116     informat Q20 $1. ;
117     informat Q21 $1. ;
118     informat Q22 $1. ;
119     informat Q23 $1. ;
120     informat Q24 $1. ;
121     informat Q25 $1. ;
122     informat Q26 $1. ;
123     informat Q27 $1. ;
124     informat Q28 $1. ;
125     informat Q29 $1. ;
126     informat Q30 $1. ;
127     informat Q31 $1. ;
128     informat Q32 $1. ;
129     informat Q33 $1. ;
130     informat Q34 $1. ;
131     informat Q35 $1. ;
132     informat Q36 $1. ;
133     informat Q37 $1. ;
134     informat Q38 $1. ;
135     informat Q39 $1. ;
136     informat Q40 $1. ;
137     informat Q41 $1. ;
138     informat Q42 $1. ;
139     informat Q43 $1. ;
140     informat Q44 $1. ;
141     informat Q45 $1. ;
142     informat Q46 $1. ;
143     informat Q47 $1. ;
144     informat Q48 $1. ;
145     informat Q49 $1. ;
146     informat Q50 $1. ;
147     informat Q51 $1. ;
148     informat Q52 $1. ;
149     informat Q53 $1. ;
150     informat Q54 $1. ;
151     informat Q55 $1. ;
152     informat Q56 $1. ;
153     informat Q57 $1. ;
154     informat Q58 $1. ;
155     informat Q59 $1. ;
156     informat Q60 $1. ;
157     informat Q61 $1. ;
158     informat Q62 $1. ;
159     informat Q63 $1. ;
160     informat Q64 $1. ;
161     informat Q65 $1. ;
162     informat Q66 $1. ;
163     informat Q67 $1. ;
164     informat Q68 $1. ;
165     informat Q69 $1. ;
166     informat Q70 $1. ;
167     informat Q71 $1. ;
168     informat Q72 $1. ;
169     informat Q73 $1. ;
170     informat Q74 $1. ;
171     informat Q75 $1. ;
172     informat Q76 $1. ;
173     informat Q77 $1. ;
174     informat Q78 $1. ;
175     informat Q79 $1. ;
176     informat Q80 $1. ;
177     informat Q81 $1. ;
178     informat Q82 $1. ;
179     informat Q83 $1. ;
180     informat Q84 $1. ;
181     informat Q85 $1. ;
182     informat Q86 $1. ;
183     informat Q87 $1. ;
184     informat Q88 $1. ;
185     informat Q89 $1. ;
186     informat Q90 $1. ;
187     informat Q91 $1. ;
```

```
188 informat Q92 $1. ;
189 informat Q93 $1. ;
190 informat Q94 $1. ;
191 informat Q95 $1. ;
192 informat Q96 $1. ;
193 informat Q97 $1. ;
194 informat Q98 $1. ;
195 informat Q99 $1. ;
196 informat Q100 $1. ;
197 informat Q101 $1. ;
198 informat Q102 $1. ;
199 informat Q103 $1. ;
200 informat Q104 $1. ;
201 informat Q105 $1. ;
202 informat Q106 $1. ;
203 informat Q107 $1. ;
204 informat Q108 $1. ;
205 informat Q109 $1. ;
206 informat Q110 $1. ;
207 informat Q111 $1. ;
208 informat Q112 $1. ;
209 informat Q113 $1. ;
210 informat Q114 $1. ;
211 informat Q115 $1. ;
212 informat Q116 $1. ;
213 informat Q117 $1. ;
214 informat Q118 $1. ;
215 informat Q119 $1. ;
216 informat Q120 $1. ;
217 informat Q121 $1. ;
218 informat Q122 $1. ;
219 informat Q123 $1. ;
220 informat Q124 $1. ;
221 informat Q125 $1. ;
222 informat Q126 $1. ;
223 informat Q127 $1. ;
224 informat Q128 $1. ;
225 informat Q129 $1. ;
226 informat Q130 $1. ;
227 informat Q131 $1. ;
228 informat Q132 $1. ;
229 informat Q133 $1. ;
230 informat Q134 $1. ;
231 informat Q135 $1. ;
232 informat Q136 $1. ;
233 informat Q137 $1. ;
234 informat Q138 $1. ;
235 informat Q139 $1. ;
236 informat Q140 $1. ;
237 informat Q141 $1. ;
238 informat Q142 $1. ;
239 informat Q143 $1. ;
240 informat Q144 $1. ;
241 informat Q145 $1. ;
242 informat Q146 $1. ;
243 informat Q147 $1. ;
244 informat Q148 $1. ;
245 informat Q149 $1. ;
246 informat Q150 $1. ;
247 format Student $7. ;
248 format Q1 $1. ;
249 format Q2 $1. ;
250 format Q3 $1. ;
251 format Q4 $1. ;
252 format Q5 $1. ;
253 format Q6 $1. ;
254 format Q7 $1. ;
255 format Q8 $1. ;
256 format Q9 $1. ;
257 format Q10 $1. ;
258 format Q11 $1. ;
259 format Q12 $1. ;
260 format Q13 $1. ;
261 format Q14 $1. ;
262 format Q15 $1. ;
263 format Q16 $1. ;
264 format Q17 $1. ;
265 format Q18 $1. ;
266 format Q19 $1. ;
267 format Q20 $1. ;
268 format Q21 $1. ;
269 format Q22 $1. ;
270 format Q23 $1. ;
271 format Q24 $1. ;
272 format Q25 $1. ;
273 format Q26 $1. ;
274 format Q27 $1. ;
275 format Q28 $1. ;
276 format Q29 $1. ;
277 format Q30 $1. ;
278 format Q31 $1. ;
279 format Q32 $1. ;
```

```
280      format Q33 $1. ;
281      format Q34 $1. ;
282      format Q35 $1. ;
283      format Q36 $1. ;
284      format Q37 $1. ;
285      format Q38 $1. ;
286      format Q39 $1. ;
287      format Q40 $1. ;
288      format Q41 $1. ;
289      format Q42 $1. ;
290      format Q43 $1. ;
291      format Q44 $1. ;
292      format Q45 $1. ;
293      format Q46 $1. ;
294      format Q47 $1. ;
295      format Q48 $1. ;
296      format Q49 $1. ;
297      format Q50 $1. ;
298      format Q51 $1. ;
299      format Q52 $1. ;
300      format Q53 $1. ;
301      format Q54 $1. ;
302      format Q55 $1. ;
303      format Q56 $1. ;
304      format Q57 $1. ;
305      format Q58 $1. ;
306      format Q59 $1. ;
307      format Q60 $1. ;
308      format Q61 $1. ;
309      format Q62 $1. ;
310      format Q63 $1. ;
311      format Q64 $1. ;
312      format Q65 $1. ;
313      format Q66 $1. ;
314      format Q67 $1. ;
315      format Q68 $1. ;
316      format Q69 $1. ;
317      format Q70 $1. ;
318      format Q71 $1. ;
319      format Q72 $1. ;
320      format Q73 $1. ;
321      format Q74 $1. ;
322      format Q75 $1. ;
323      format Q76 $1. ;
324      format Q77 $1. ;
325      format Q78 $1. ;
326      format Q79 $1. ;
327      format Q80 $1. ;
328      format Q81 $1. ;
329      format Q82 $1. ;
330      format Q83 $1. ;
331      format Q84 $1. ;
332      format Q85 $1. ;
333      format Q86 $1. ;
334      format Q87 $1. ;
335      format Q88 $1. ;
336      format Q89 $1. ;
337      format Q90 $1. ;
338      format Q91 $1. ;
339      format Q92 $1. ;
340      format Q93 $1. ;
341      format Q94 $1. ;
342      format Q95 $1. ;
343      format Q96 $1. ;
344      format Q97 $1. ;
345      format Q98 $1. ;
346      format Q99 $1. ;
347      format Q100 $1. ;
348      format Q101 $1. ;
349      format Q102 $1. ;
350      format Q103 $1. ;
351      format Q104 $1. ;
352      format Q105 $1. ;
353      format Q106 $1. ;
354      format Q107 $1. ;
355      format Q108 $1. ;
356      format Q109 $1. ;
357      format Q110 $1. ;
358      format Q111 $1. ;
359      format Q112 $1. ;
360      format Q113 $1. ;
361      format Q114 $1. ;
362      format Q115 $1. ;
363      format Q116 $1. ;
364      format Q117 $1. ;
365      format Q118 $1. ;
366      format Q119 $1. ;
367      format Q120 $1. ;
368      format Q121 $1. ;
369      format Q122 $1. ;
370      format Q123 $1. ;
371      format Q124 $1. ;
```

```

372         format Q125 $1. ;
373         format Q126 $1. ;
374         format Q127 $1. ;
375         format Q128 $1. ;
376         format Q129 $1. ;
377         format Q130 $1. ;
378         format Q131 $1. ;
379         format Q132 $1. ;
380         format Q133 $1. ;
381         format Q134 $1. ;
382         format Q135 $1. ;
383         format Q136 $1. ;
384         format Q137 $1. ;
385         format Q138 $1. ;
386         format Q139 $1. ;
387         format Q140 $1. ;
388         format Q141 $1. ;
389         format Q142 $1. ;
390         format Q143 $1. ;
391         format Q144 $1. ;
392         format Q145 $1. ;
393         format Q146 $1. ;
394         format Q147 $1. ;
395         format Q148 $1. ;
396         format Q149 $1. ;
397         format Q150 $1. ;
398     input
399           Student $
400           Q1 $
401           Q2 $
402           Q3 $
403           Q4 $
404           Q5 $
405           Q6 $
406           Q7 $
407           Q8 $
408           Q9 $
409           Q10 $
410           Q11 $
411           Q12 $
412           Q13 $
413           Q14 $
414           Q15 $
415           Q16 $
416           Q17 $
417           Q18 $
418           Q19 $
419           Q20 $
420           Q21 $
421           Q22 $
422           Q23 $
423           Q24 $
424           Q25 $
425           Q26 $
426           Q27 $
427           Q28 $
428           Q29 $
429           Q30 $
430           Q31 $
431           Q32 $
432           Q33 $
433           Q34 $
434           Q35 $
435           Q36 $
436           Q37 $
437           Q38 $
438           Q39 $
439           Q40 $
440           Q41 $
441           Q42 $
442           Q43 $
443           Q44 $
444           Q45 $
445           Q46 $
446           Q47 $
447           Q48 $
448           Q49 $
449           Q50 $
450           Q51 $
451           Q52 $
452           Q53 $
453           Q54 $
454           Q55 $
455           Q56 $
456           Q57 $
457           Q58 $
458           Q59 $
459           Q60 $
460           Q61 $
461           Q62 $
462           Q63 $
463           Q64 $

```



```
464          Q65 $
465          Q66 $
466          Q67 $
467          Q68 $
468          Q69 $
469          Q70 $
470          Q71 $
471          Q72 $
472          Q73 $
473          Q74 $
474          Q75 $
475          Q76 $
476          Q77 $
477          Q78 $
478          Q79 $
479          Q80 $
480          Q81 $
481          Q82 $
482          Q83 $
483          Q84 $
484          Q85 $
485          Q86 $
486          Q87 $
487          Q88 $
488          Q89 $
489          Q90 $
490          Q91 $
491          Q92 $
492          Q93 $
493          Q94 $
494          Q95 $
495          Q96 $
496          Q97 $
497          Q98 $
498          Q99 $
499          Q100 $
500          Q101 $
501          Q102 $
502          Q103 $
503          Q104 $
504          Q105 $
505          Q106 $
506          Q107 $
507          Q108 $
508          Q109 $
509          Q110 $
510          Q111 $
511          Q112 $
512          Q113 $
513          Q114 $
514          Q115 $
515          Q116 $
516          Q117 $
517          Q118 $
518          Q119 $
519          Q120 $
520          Q121 $
521          Q122 $
522          Q123 $
523          Q124 $
524          Q125 $
525          Q126 $
526          Q127 $
527          Q128 $
528          Q129 $
529          Q130 $
530          Q131 $
531          Q132 $
532          Q133 $
533          Q134 $
534          Q135 $
535          Q136 $
536          Q137 $
537          Q138 $
538          Q139 $
539          Q140 $
540          Q141 $
541          Q142 $
542          Q143 $
543          Q144 $
544          Q145 $
545          Q146 $
546          Q147 $
547          Q148 $
548          Q149 $
549          Q150 $
550      ;
551      if _ERROR_ then call symputx('_EFIERR_',1); /* set ERROR detection macro variable */
552      run;
```

NOTE: The infile '/home/u45036707/Assignment Files/FormA.csv' is:
Filename=/home/u45036707/Assignment Files/FormA.csv,

```

Owner Name=u45036707,Group Name=oda,
Access Permission=-rw-r--r--,
Last Modified=23May2020:23:08:43,
File Size (bytes)=16154

```

NOTE: 51 records were read from the infile '/home/u45036707/Assignment Files/FormA.csv'.
 The minimum record length was 301.
 The maximum record length was 307.

NOTE: The data set WORK.FORMA has 51 observations and 151 variables.

NOTE: DATA statement used (Total process time):

```

real time          0.00 seconds
user cpu time      0.01 seconds
system cpu time    0.00 seconds
memory            10072.62k
OS Memory         39464.00k
Timestamp         06/15/2020 05:06:41 PM
Step Count                46  Switch Count  2
Page Faults                0
Page Reclaims            244
Page Swaps                0
Voluntary Context Switches 10
Involuntary Context Switches 0
Block Input Operations    0
Block Output Operations   264

```

51 rows created in WORK.FORMA from /home/u45036707/Assignment Files/FormA.csv.

NOTE: WORK.FORMA data set was successfully created.

NOTE: The data set WORK.FORMA has 51 observations and 151 variables.

NOTE: PROCEDURE IMPORT used (Total process time):

```

real time          0.14 seconds
user cpu time      0.14 seconds
system cpu time    0.01 seconds
memory            10072.62k
OS Memory         39724.00k
Timestamp         06/15/2020 05:06:41 PM
Step Count                46  Switch Count  8
Page Faults                0
Page Reclaims          3237
Page Swaps                0
Voluntary Context Switches 71
Involuntary Context Switches 0
Block Input Operations    32
Block Output Operations   288

```

```

553
554   proc import datafile = "/home/u45036707/Assignment Files/Domains Form&type..csv"
555   out = Domain&type
556   dbms = csv
557   replace;
558   run;

```

NOTE: Unable to open parameter catalog: SASUSER.PARMS.PARMS.SLIST in update mode. Temporary parameter values will be saved to WORK.PARMS.PARMS.SLIST.

```

559   /*****
560   *   PRODUCT:   SAS
561   *   VERSION:   9.4
562   *   CREATOR:   External File Interface
563   *   DATE:      15JUN20
564   *   DESC:      Generated SAS Datastep Code
565   *   TEMPLATE SOURCE: (None Specified.)
566   *****/
567   data WORK.DOMAINA ;
568   %let _EFIERR_ = 0; /* set the ERROR detection macro variable */
569   infile '/home/u45036707/Assignment Files/Domains FormA.csv' delimiter = ',' MISOVER DSD lrecl=32767 firstobs=2 ;
570   informat ItemId best32. ;
571   informat Domain $50. ;
572   informat DomainNum best32. ;
573   informat QuestionNum best32. ;
574   format ItemId best12. ;
575   format Domain $50. ;
576   format DomainNum best12. ;
577   format QuestionNum best12. ;
578   input
579       ItemId
580       Domain $
581       DomainNum
582       QuestionNum
583   ;
584   if _ERROR_ then call symputx('_EFIERR_',1); /* set ERROR detection macro variable */
585   run;

```

NOTE: The infile '/home/u45036707/Assignment Files/Domains FormA.csv' is:

```

Filename=/home/u45036707/Assignment Files/Domains FormA.csv,
Owner Name=u45036707,Group Name=oda,
Access Permission=-rw-r--r--,
Last Modified=23May2020:23:08:58,
File Size (bytes)=7059

```

```

NOTE: 150 records were read from the infile '/home/u45036707/Assignment Files/Domains FormA.csv'.
      The minimum record length was 40.
      The maximum record length was 62.
NOTE: The data set WORK.DOMAINA has 150 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              9174.46k
      OS Memory           38436.00k
      Timestamp           06/15/2020 05:06:41 PM
      Step Count          47   Switch Count   2
      Page Faults         0
      Page Reclaims       149
      Page Swaps          0
      Voluntary Context Switches 11
      Involuntary Context Switches 0
      Block Input Operations 0
      Block Output Operations 264

```

150 rows created in WORK.DOMAINA from /home/u45036707/Assignment Files/Domains FormA.csv.

```

NOTE: WORK.DOMAINA data set was successfully created.
NOTE: The data set WORK.DOMAINA has 150 observations and 4 variables.
NOTE: PROCEDURE IMPORT used (Total process time):
      real time           0.04 seconds
      user cpu time       0.04 seconds
      system cpu time     0.01 seconds
      memory              9174.46k
      OS Memory           38696.00k
      Timestamp           06/15/2020 05:06:41 PM
      Step Count          47   Switch Count   8
      Page Faults         0
      Page Reclaims       2793
      Page Swaps          0
      Voluntary Context Switches 69
      Involuntary Context Switches 0
      Block Input Operations 16
      Block Output Operations 280

```

```

586
587      /* part 1 */
588      /* Creating a Table to display the form A whether the student get questions right or wrong. Score "1" is right, "0" is
589      ! wrong. */
589      data result&type;
590      set Form&type;
591
592      array tests(150) $ Q1-Q150;
593      array answerKey (*) $ K1-K150;
594
595      Form = "&type";
596
597      retain K1-K150;
598      If Student = "&type.&type.&type.&type.KEY" then do i = 1 to 150;
599      answerKey(i) = tests(i);
600
601      end;
602      else do Questions = 1 to 150;
603      if answerKey(Questions) = tests(Questions) then Score = 1;
604      else Score = 0;
605      output;
606      end;
607
608      keep student Score Questions Form;
609      run;

```

```

NOTE: There were 51 observations read from the data set WORK.FORMA.
NOTE: The data set WORK.RESULTA has 7500 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              1428.03k
      OS Memory           33460.00k
      Timestamp           06/15/2020 05:06:41 PM
      Step Count          48   Switch Count   2
      Page Faults         0
      Page Reclaims       95
      Page Swaps          0
      Voluntary Context Switches 9
      Involuntary Context Switches 0
      Block Input Operations 0
      Block Output Operations 520

```

610
611

```

612      /* Part 2 */
613      /* Merge the table with FormA and DomainA */
614      proc sql;
615      create table joined&type as
616      select Form,student,result&type..Questions,Score,DomainNum
617      from result&type inner join Domain&type
618      on result&type..Questions = Domain&type..QuestionNum;
NOTE: Table WORK.JOINEDA created, with 7500 rows and 5 columns.

```

```

619      quit;
NOTE: PROCEDURE SQL used (Total process time):
real time          0.00 seconds
user cpu time      0.00 seconds
system cpu time    0.00 seconds
memory            5997.06k
OS Memory         38584.00k
Timestamp         06/15/2020 05:06:41 PM
Step Count              49  Switch Count  2
Page Faults              0
Page Reclaims          135
Page Swaps              0
Voluntary Context Switches 10
Involuntary Context Switches 0
Block Input Operations  0
Block Output Operations 520

```

```

620
621      /* Part 3 */;
622      /* Combine the two tables for Forms A and B created in step 2; */
623      /* Convert Student type from char to numeric */
624      data table_combined;
625      set joinedA joinedB;
626      Students = input(Student,8.);
627      drop Student;
628      rename Students = Student;
629      run;

```

NOTE: There were 7500 observations read from the data set WORK.JOINEDA.
NOTE: There were 7350 observations read from the data set WORK.JOINEDB.
NOTE: The data set WORK.TABLE_COMBINED has 14850 observations and 5 variables.
NOTE: DATA statement used (Total process time):

```

real time          0.00 seconds
user cpu time      0.00 seconds
system cpu time    0.00 seconds
memory            2115.65k
OS Memory         34744.00k
Timestamp         06/15/2020 05:06:41 PM
Step Count              50  Switch Count  2
Page Faults              0
Page Reclaims          288
Page Swaps              0
Voluntary Context Switches 9
Involuntary Context Switches 0
Block Input Operations  0
Block Output Operations 1288

```

```

630
631      /* Part 4 */
632      /* Totalscore and percent for each student, and five domains */
633      proc means data = table_combined sum mean noprint;
634      var Score;
635      class Student DomainNum;
636      id Form;
637      output out = Score_mean (drop=_TYPE_ _FREQ_) mean=percentage sum=totalscore;
638      run;

```

NOTE: There were 14850 observations read from the data set WORK.TABLE_COMBINED.
NOTE: The data set WORK.SCORE_MEAN has 600 observations and 5 variables.
NOTE: PROCEDURE MEANS used (Total process time):

```

real time          0.00 seconds
user cpu time      0.00 seconds
system cpu time    0.01 seconds
memory            8933.64k
OS Memory         41036.00k
Timestamp         06/15/2020 05:06:41 PM
Step Count              51  Switch Count  3
Page Faults              0
Page Reclaims          1822
Page Swaps              0
Voluntary Context Switches 65
Involuntary Context Switches 0
Block Input Operations  0
Block Output Operations 264

```

```

639
640      /* proc print data=Score_mean; */
641      /* run; */
642
643      /* Part 5 */

```

```

644      /* sort the table by students */
645      proc sort data=Score_mean;
646      by Student;
647      where Student is not missing;
648      format percentage 8.5;
649      run;

```

NOTE: There were 594 observations read from the data set WORK.SCORE_MEAN.

WHERE Student is not null;

NOTE: The data set WORK.SCORE_MEAN has 594 observations and 5 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time          0.00 seconds
user cpu time      0.01 seconds
system cpu time    0.00 seconds
memory            945.59k
OS Memory          34484.00k
Timestamp          06/15/2020 05:06:41 PM
Step Count         52   Switch Count  5
Page Faults        0
Page Reclaims      122
Page Swaps         0
Voluntary Context Switches 17
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 264

```

```

650
651      /* Part 6 */
652      data Students_combined;
653      set Score_mean;
654
655      array Score_domain(*) OP OS DP1 DS1 DP2 DS2 DP3 DS3 DP4 DS4 DP5 DS5;
656      retain OP OS DP1 DS1 DP2 DS2 DP3 DS3 DP4 DS4 DP5 DS5;
657
658      by Student;
659
660      if first.Student then i = 0;
661      i+1;
662      Score_domain(i) = percentage;
663      i+1;
664      Score_domain(i) = totalscore;
665
666      if last.Student then output;
667
668      label OP = "Overall Percentage"
669            OS = "Overall Score"
670            DP1 = "Domain 1 Percentage"
671            DS1 = "Domain 1 Score"
672            DP2 = "Domain 2 Percentage"
673            DS2 = "Domain 2 Score"
674            DP3 = "Domain 3 Percentage"
675            DS3 = "Domain 3 Score"
676            DP4 = "Domain 4 Percentage"
677            DS4 = "Domain 4 Score"
678            DP5 = "Domain 5 Percentage"
679            DS5 = "Domain 5 Score";
680      drop i DomainNum percentage totalscore;
681      format DP1-DS5 percent7.2 OP percent7.2;
682
683      run;

```

NOTE: There were 594 observations read from the data set WORK.SCORE_MEAN.

NOTE: The data set WORK.STUDENTS_COMBINED has 99 observations and 14 variables.

NOTE: DATA statement used (Total process time):

```

real time          0.00 seconds
user cpu time      0.00 seconds
system cpu time    0.00 seconds
memory            1048.21k
OS Memory          34484.00k
Timestamp          06/15/2020 05:06:41 PM
Step Count         53   Switch Count  2
Page Faults        0
Page Reclaims      125
Page Swaps         0
Voluntary Context Switches 9
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 264

```

```

684
685      /* proc print data = Students_combined label; */
686      /* var Student Form OS OP DS1 DP1 DS2 DP2 DS3 DP3 DS4 DP4 DS5 DP5; */
687      /* */
688      /* run; */
689
690      /* Part 7 */
691      /* side-by-side boxplots of give domains using student percentages as the response */
692      title "Boxplots of Student Percentage for Five Domains";
693      proc sgplot data=Score_mean;
694      vbox percentage/category=DomainNum;

```

```

695      xaxis label="Domain";
696      yaxis label="Student Percentage";
697      format Student Percentage PERCENT8.1;
698      run;

```

NOTE: PROCEDURE SGPLOT used (Total process time):

```

real time      2.42 seconds
user cpu time   0.08 seconds
system cpu time 0.02 seconds
memory         14597.03k
OS Memory      45744.00k
Timestamp      06/15/2020 05:06:43 PM
Step Count     54  Switch Count  1
Page Faults    0
Page Reclaims  4231
Page Swaps     0
Voluntary Context Switches 525
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 696

```

NOTE: There were 594 observations read from the data set WORK.SCORE_MEAN.

```

699      title;
700
701      /* Part 8 */
702      /* Percentage correct for each question in separated form */
703      proc means data=table_combined mean nonobs noprint;
704      var Score;
705      class Form Questions;
706      id Student;
707      ways 2;
708      output out = percentOnQuestions (drop= _TYPE_ _FREQ_) mean=QuestionPercent;
709
710      run;

```

NOTE: There were 14850 observations read from the data set WORK.TABLE_COMBINED.

NOTE: The data set WORK.PERCENTONQUESTIONS has 300 observations and 4 variables.

NOTE: PROCEDURE MEANS used (Total process time):

```

real time      0.01 seconds
user cpu time   0.01 seconds
system cpu time 0.00 seconds
memory         8926.09k
OS Memory      54092.00k
Timestamp      06/15/2020 05:06:43 PM
Step Count     55  Switch Count  3
Page Faults    0
Page Reclaims  2078
Page Swaps     0
Voluntary Context Switches 59
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 264

```

```

711      /* */
712      /* title "Percent correct for each question"; */
713      /* proc print data=percentOnQuestions; */
714      /* var Form Questions QuestionPercent; */
715      /* format QuestionPercent 4.2; */
716      /* run; */
717      /* title; */
718
719      /* Part 9 */
720      /* create PDF file */
721      ods pdf file= "~/124_Assignments/Final_Project.pdf";
NOTE: Writing ODS PDF output to DISK destination "/home/u45036707/124_Assignments/Final_Project.pdf", printer "PDF".
722      options nodate nonumber orientation=landscape;
723
724      /* Section A */
725      *Table sorted by stduentID;
726      title "Section A - Student Scores";
727      title2 "Sorted by Student ID";
728      proc print data = Students_combined label noobs;
729      var Student Form OS OP DS1 DS2 DS3 DS4 DS5 DP1 DP2 DP3 DP4 DP5;
730
731      run;

```

NOTE: There were 99 observations read from the data set WORK.STUDENTS_COMBINED.

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST" format.

NOTE: PROCEDURE PRINT used (Total process time):

```

real time      0.33 seconds
user cpu time   0.33 seconds
system cpu time 0.00 seconds
memory         4465.84k
OS Memory      52660.00k
Timestamp      06/15/2020 05:06:44 PM
Step Count     56  Switch Count  0
Page Faults    0
Page Reclaims  1000
Page Swaps     0
Voluntary Context Switches 0

```

```

Involuntary Context Switches      2
Block Input Operations             0
Block Output Operations            168

```

```

732      title;
733
734      *Table sorted by overall percentage;
735      proc sort data=Students_combined out= combined_sorted;
736      by descending OS;
737      run;

```

NOTE: There were 99 observations read from the data set WORK.STUDENTS_COMBINED.

NOTE: The data set WORK.COMBINED_SORTED has 99 observations and 14 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      0.00 seconds
user cpu time   0.00 seconds
system cpu time 0.00 seconds
memory         1192.84k
OS Memory      53180.00k
Timestamp      06/15/2020 05:06:44 PM
Step Count     57  Switch Count  2
Page Faults    0
Page Reclaims  148
Page Swaps     0
Voluntary Context Switches  12
Involuntary Context Switches 0
Block Input Operations      0
Block Output Operations     272

```

```

738
739      title "Section A - Student Scores";
740      title2 "Sorted Highest to Lowest Overall Score";
741      proc print data=combined_sorted label noobs;
742      var Student Form OP OS DP1 DP2 DP3 DP4 DP5 DS1 DS2 DS3 DS4 DS5;
743      run;

```

NOTE: There were 99 observations read from the data set WORK.COMBINED_SORTED.

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST" format.

NOTE: PROCEDURE PRINT used (Total process time):

```

real time      0.32 seconds
user cpu time   0.32 seconds
system cpu time 0.00 seconds
memory         858.87k
OS Memory      52916.00k
Timestamp      06/15/2020 05:06:44 PM
Step Count     58  Switch Count  0
Page Faults    0
Page Reclaims  121
Page Swaps     0
Voluntary Context Switches  0
Involuntary Context Switches 0
Block Input Operations      0
Block Output Operations     184

```

```

744      title;
745
746      *side-by-side boxplot;
747      title "Section A - Student Scores";
748      title2 "Boxplots of Student Percentage for Five Domains";
749      proc sgplot data=Score_mean;
750      vbox percentage/category=DomainNum;
751      xaxis label="Domain";
752      yaxis label="Student Percentage";
753      format Student Percentage PERCENT8.1;
754      run;

```

NOTE: PROCEDURE SGPLOT used (Total process time):

```

real time      0.33 seconds
user cpu time   0.08 seconds
system cpu time 0.01 seconds
memory         7822.68k
OS Memory      59828.00k
Timestamp      06/15/2020 05:06:45 PM
Step Count     59  Switch Count  1
Page Faults    0
Page Reclaims  2093
Page Swaps     0
Voluntary Context Switches  420
Involuntary Context Switches 0
Block Input Operations      0
Block Output Operations     648

```

NOTE: There were 594 observations read from the data set WORK.SCORE_MEAN.

```

755      title;
756
757      /* Section B */
758      *table sorted by exam form then by question number;
759      title "Section B: Question Analysis";

```

```

760      title2 "Sorted by Exam Form and Question Number";
761      proc print data=percentOnQuestions noobs;
762      var Form Questions QuestionPercent;
763      format QuestionPercent percent8.1;
764      run;

```

NOTE: There were 300 observations read from the data set WORK.PERCENTONQUESTIONS.

NOTE: PROCEDURE PRINT used (Total process time):

```

real time      0.26 seconds
user cpu time   0.26 seconds
system cpu time 0.00 seconds
memory         618.93k
OS Memory      60084.00k
Timestamp      06/15/2020 05:06:45 PM
Step Count     60   Switch Count  0
Page Faults    0
Page Reclaims  66
Page Swaps     0
Voluntary Context Switches 0
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 152

```

```

765      title;
766
767      *table sorted by question percentage;
768      proc sort data=percentOnQuestions out=sorted_percentOnQuestions;
769      by descending QuestionPercent;
770      format QuestionPercent percent8.1;
771      run;

```

NOTE: There were 300 observations read from the data set WORK.PERCENTONQUESTIONS.

NOTE: The data set WORK.SORTED_PERCENTONQUESTIONS has 300 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      0.00 seconds
user cpu time   0.00 seconds
system cpu time 0.00 seconds
memory         1201.12k
OS Memory      60604.00k
Timestamp      06/15/2020 05:06:45 PM
Step Count     61   Switch Count  2
Page Faults    0
Page Reclaims  150
Page Swaps     0
Voluntary Context Switches 15
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 272

```

```

772
773      title "Section B: Question Analysis";
774      title2 "Sorted by Question Percentage";
775      proc print data = sorted_percentOnQuestions;
776      var QuestionPercent Form Questions;
777      run;

```

NOTE: There were 300 observations read from the data set WORK.SORTED_PERCENTONQUESTIONS.

NOTE: PROCEDURE PRINT used (Total process time):

```

real time      0.34 seconds
user cpu time   0.34 seconds
system cpu time 0.00 seconds
memory         630.56k
OS Memory      60084.00k
Timestamp      06/15/2020 05:06:45 PM
Step Count     62   Switch Count  0
Page Faults    0
Page Reclaims  66
Page Swaps     0
Voluntary Context Switches 0
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 192

```

```

778      title;
779
780      ods pdf close;
NOTE: ODS PDF printed 33 pages to /home/u45036707/124_Assignments/Final_Project.pdf.

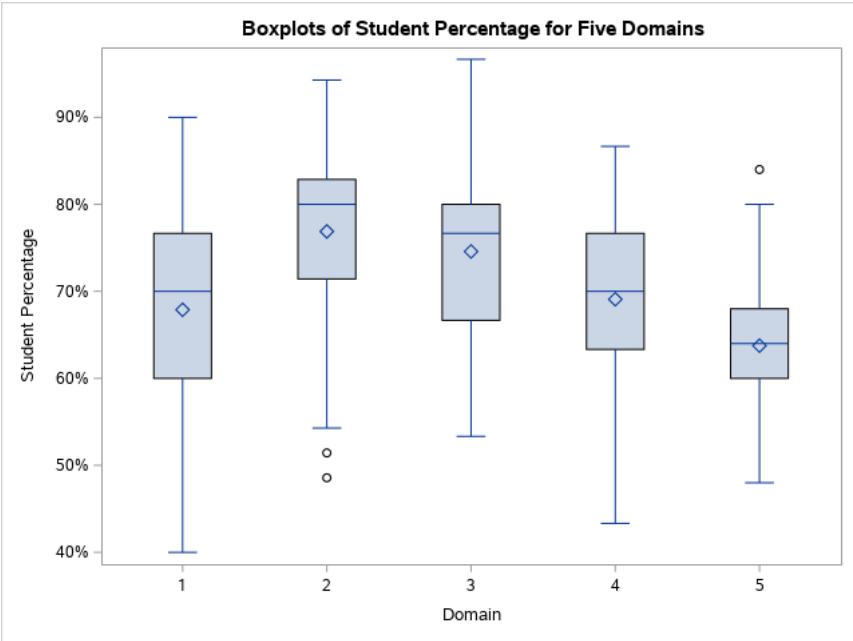
```

```

781
782
783
784
785
786
787
788
789
790
791
792

```


Results: Final project.sas~



Section A - Student Scores Sorted by Student ID													
Student	Form	Overall Score	Overall Percentage	Domain 1 Score	Domain 2 Score	Domain 3 Score	Domain 4 Score	Domain 5 Score	Domain 1 Percentage	Domain 2 Percentage	Domain 3 Percentage	Domain 4 Percentage	Domain 5 Percentage
1	A	103	68.7%	17	24	25	24	13	56.7%	68.6%	83.3%	80.0%	52.0%
2	B	121	80.7%	26	31	25	24	15	86.7%	88.6%	83.3%	80.0%	60.0%
3	A	101	67.3%	19	25	23	18	16	63.3%	71.4%	76.7%	60.0%	64.0%
4	B	114	76.0%	22	31	25	21	15	73.3%	88.6%	83.3%	70.0%	60.0%
5	A	114	76.0%	22	28	26	23	15	73.3%	80.0%	86.7%	76.7%	60.0%
6	B	108	72.0%	19	29	20	23	17	63.3%	82.9%	66.7%	76.7%	68.0%
7	A	123	82.0%	24	31	25	26	17	80.0%	88.6%	83.3%	86.7%	68.0%
8	B	94	62.7%	16	24	19	18	17	53.3%	68.6%	63.3%	60.0%	68.0%
9	A	102	68.0%	20	26	20	22	14	66.7%	74.3%	66.7%	73.3%	56.0%
10	B	103	68.7%	25	22	23	20	13	83.3%	62.9%	76.7%	66.7%	52.0%
11	A	101	67.3%	20	27	22	19	13	66.7%	77.1%	73.3%	63.3%	52.0%
12	B	107	71.3%	18	30	23	19	17	60.0%	85.7%	76.7%	63.3%	68.0%
13	A	107	71.3%	19	22	23	23	20	63.3%	62.9%	76.7%	76.7%	80.0%
14	B	105	70.0%	17	29	23	21	15	56.7%	82.9%	76.7%	70.0%	60.0%
15	A	110	73.3%	23	26	23	21	17	76.7%	74.3%	76.7%	70.0%	68.0%
16	B	115	76.7%	23	29	25	20	18	76.7%	82.9%	83.3%	66.7%	72.0%
17	A	119	79.3%	24	30	26	23	16	80.0%	85.7%	86.7%	76.7%	64.0%
18	B	104	69.3%	24	29	23	16	12	80.0%	82.9%	76.7%	53.3%	48.0%
19	A	87	58.0%	18	19	18	16	16	60.0%	54.3%	60.0%	53.3%	64.0%
20	B	118	78.7%	25	29	23	24	17	83.3%	82.9%	76.7%	80.0%	68.0%
21	A	99	66.0%	19	24	21	21	14	63.3%	68.6%	70.0%	70.0%	56.0%
22	B	99	66.0%	20	27	22	15	15	66.7%	77.1%	73.3%	50.0%	60.0%
23	A	115	76.7%	22	26	28	21	18	73.3%	74.3%	93.3%	70.0%	72.0%
24	B	84	56.0%	15	22	17	18	12	50.0%	62.9%	56.7%	60.0%	48.0%
25	A	114	76.0%	23	29	25	21	16	76.7%	82.9%	83.3%	70.0%	64.0%
26	B	113	75.3%	22	25	23	25	18	73.3%	71.4%	76.7%	83.3%	72.0%
27	A	92	61.3%	13	27	16	22	14	43.3%	77.1%	53.3%	73.3%	56.0%
28	B	98	65.3%	18	30	20	18	12	60.0%	85.7%	66.7%	60.0%	48.0%
29	A	102	68.0%	18	24	22	21	17	60.0%	68.6%	73.3%	70.0%	68.0%
30	B	99	66.0%	18	20	23	22	16	60.0%	57.1%	76.7%	73.3%	64.0%
31	A	106	70.7%	18	28	23	23	14	60.0%	80.0%	76.7%	76.7%	56.0%
32	B	78	52.0%	12	20	16	14	16	40.0%	57.1%	53.3%	46.7%	64.0%
33	A	91	60.7%	17	24	20	16	14	56.7%	68.6%	66.7%	53.3%	56.0%
34	B	101	67.3%	21	27	19	17	17	70.0%	77.1%	63.3%	56.7%	68.0%

2020/6/15				Program Summary - Final project.sas~									
Student	Form	Overall Score	Overall Percentage	Domain 1 Score	Domain 2 Score	Domain 3 Score	Domain 4 Score	Domain 5 Score	Domain 1 Percentage	Domain 2 Percentage	Domain 3 Percentage	Domain 4 Percentage	Domain 5 Percentage
35	A	115	76.7%	24	26	26	22	17	80.0%	74.3%	86.7%	73.3%	68.0%
36	B	117	78.0%	25	31	25	22	14	83.3%	88.6%	83.3%	73.3%	56.0%
37	A	113	75.3%	21	27	25	23	17	70.0%	77.1%	83.3%	76.7%	68.0%
38	B	92	61.3%	18	25	23	13	13	60.0%	71.4%	76.7%	43.3%	52.0%
39	A	117	78.0%	25	26	29	21	16	83.3%	74.3%	96.7%	70.0%	64.0%
40	B	96	64.0%	15	25	20	17	19	50.0%	71.4%	66.7%	56.7%	76.0%
41	A	95	63.3%	14	25	17	20	19	46.7%	71.4%	56.7%	66.7%	76.0%
42	B	112	74.7%	24	29	23	22	14	80.0%	82.9%	76.7%	73.3%	56.0%
43	A	118	78.7%	22	31	23	26	16	73.3%	88.6%	76.7%	86.7%	64.0%
44	B	85	56.7%	17	21	19	15	13	56.7%	60.0%	63.3%	50.0%	52.0%
45	A	100	66.7%	19	25	24	19	13	63.3%	71.4%	80.0%	63.3%	52.0%
46	B	105	70.0%	21	27	22	21	14	70.0%	77.1%	73.3%	70.0%	56.0%
47	A	96	64.0%	15	24	18	21	18	50.0%	68.6%	60.0%	70.0%	72.0%
48	B	121	80.7%	27	31	24	23	16	90.0%	88.6%	80.0%	76.7%	64.0%
49	A	114	76.0%	21	29	24	23	17	70.0%	82.9%	80.0%	76.7%	68.0%
50	B	99	66.0%	19	25	21	20	14	63.3%	71.4%	70.0%	66.7%	56.0%
51	A	113	75.3%	20	30	23	22	18	66.7%	85.7%	76.7%	73.3%	72.0%
52	B	104	69.3%	21	28	21	17	17	70.0%	80.0%	70.0%	56.7%	68.0%
53	A	98	65.3%	19	20	24	20	15	63.3%	57.1%	80.0%	66.7%	60.0%
54	B	126	84.0%	25	33	26	25	17	83.3%	94.3%	86.7%	83.3%	68.0%
55	A	123	82.0%	26	29	25	24	19	86.7%	82.9%	83.3%	80.0%	76.0%
56	B	104	69.3%	22	29	20	21	12	73.3%	82.9%	66.7%	70.0%	48.0%
57	A	103	68.7%	17	27	21	19	19	56.7%	77.1%	70.0%	63.3%	76.0%
58	B	99	66.0%	20	24	18	21	16	66.7%	68.6%	60.0%	70.0%	64.0%
59	A	119	79.3%	21	29	25	25	19	70.0%	82.9%	83.3%	83.3%	76.0%
60	B	116	77.3%	22	32	22	23	17	73.3%	91.4%	73.3%	76.7%	68.0%
61	A	106	70.7%	17	25	26	21	17	56.7%	71.4%	86.7%	70.0%	68.0%
62	B	91	60.7%	16	26	20	14	15	53.3%	74.3%	66.7%	46.7%	60.0%
63	A	97	64.7%	19	24	25	17	12	63.3%	68.6%	83.3%	56.7%	48.0%
65	A	122	81.3%	23	33	24	24	18	76.7%	94.3%	80.0%	80.0%	72.0%
66	B	107	71.3%	22	28	22	19	16	73.3%	80.0%	73.3%	63.3%	64.0%
67	A	122	81.3%	25	29	25	24	19	83.3%	82.9%	83.3%	80.0%	76.0%
68	B	108	72.0%	21	29	22	21	15	70.0%	82.9%	73.3%	70.0%	60.0%
69	A	119	79.3%	24	29	24	24	18	80.0%	82.9%	80.0%	80.0%	72.0%
70	B	103	68.7%	16	30	20	22	15	53.3%	85.7%	66.7%	73.3%	60.0%
71	A	88	58.7%	17	18	18	19	16	56.7%	51.4%	60.0%	63.3%	64.0%
72	B	110	73.3%	22	31	23	19	15	73.3%	88.6%	76.7%	63.3%	60.0%
73	A	117	78.0%	24	28	28	21	16	80.0%	80.0%	93.3%	70.0%	64.0%
74	B	108	72.0%	18	30	21	23	16	60.0%	85.7%	70.0%	76.7%	64.0%
75	A	119	79.3%	22	29	26	26	16	73.3%	82.9%	86.7%	86.7%	64.0%
76	B	112	74.7%	24	28	20	21	19	80.0%	80.0%	66.7%	70.0%	76.0%
77	A	88	58.7%	13	23	20	15	17	43.3%	65.7%	66.7%	50.0%	68.0%
78	B	115	76.7%	22	29	24	21	19	73.3%	82.9%	80.0%	70.0%	76.0%
79	A	120	80.0%	25	31	23	24	17	83.3%	88.6%	76.7%	80.0%	68.0%
80	B	106	70.7%	20	26	22	23	15	66.7%	74.3%	73.3%	76.7%	60.0%
81	A	122	81.3%	21	32	26	26	17	70.0%	91.4%	86.7%	86.7%	68.0%
82	B	122	81.3%	23	30	23	25	21	76.7%	85.7%	76.7%	83.3%	84.0%
83	A	112	74.7%	20	29	19	25	19	66.7%	82.9%	63.3%	83.3%	76.0%
84	B	102	68.0%	25	26	18	18	15	83.3%	74.3%	60.0%	60.0%	60.0%
85	A	88	58.7%	17	25	17	15	14	56.7%	71.4%	56.7%	50.0%	56.0%
86	B	106	70.7%	21	32	21	17	15	70.0%	91.4%	70.0%	56.7%	60.0%
87	A	104	69.3%	22	21	23	22	16	73.3%	60.0%	76.7%	73.3%	64.0%
88	B	101	67.3%	15	24	23	23	16	50.0%	68.6%	76.7%	76.7%	64.0%
89	A	106	70.7%	20	28	22	18	18	66.7%	80.0%	73.3%	60.0%	72.0%
90	B	101	67.3%	17	30	24	15	15	56.7%	85.7%	80.0%	50.0%	60.0%
91	A	111	74.0%	24	27	24	24	12	80.0%	77.1%	80.0%	80.0%	48.0%
92	B	117	78.0%	24	28	26	22	17	80.0%	80.0%	86.7%	73.3%	68.0%
93	A	100	66.7%	20	21	19	24	16	66.7%	60.0%	63.3%	80.0%	64.0%
94	B	108	72.0%	23	32	20	16	17	76.7%	91.4%	66.7%	53.3%	68.0%
95	A	96	64.0%	17	22	21	21	15	56.7%	62.9%	70.0%	70.0%	60.0%
96	B	112	74.7%	23	29	23	21	16	76.7%	82.9%	76.7%	70.0%	64.0%
97	A	117	78.0%	20	29	28	24	16	66.7%	82.9%	93.3%	80.0%	64.0%
98	B	79	52.7%	15	17	19	14	14	50.0%	48.6%	63.3%	46.7%	56.0%
99	A	106	70.7%	18	26	23	23	16	60.0%	74.3%	76.7%	76.7%	64.0%
100	B	110	73.3%	24	28	20	21	17	80.0%	80.0%	66.7%	70.0%	68.0%

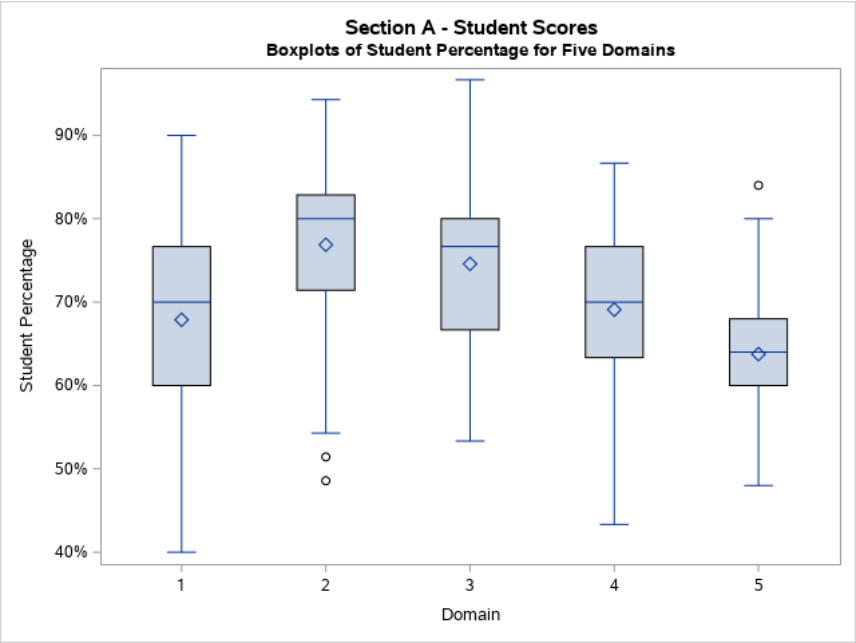
2020/6/15

Program Summary - Final project.sas~

Sorted Highest to Lowest Overall Score

Student	Form	Overall Percentage	Overall Score	Domain 1 Percentage	Domain 2 Percentage	Domain 3 Percentage	Domain 4 Percentage	Domain 5 Percentage	Domain 1 Score	Domain 2 Score	Domain 3 Score	Domain 4 Score	Domain 5 Score
54	B	84.0%	126	83.3%	94.3%	86.7%	83.3%	68.0%	25	33	26	25	17
7	A	82.0%	123	80.0%	88.6%	83.3%	86.7%	68.0%	24	31	25	26	17
55	A	82.0%	123	86.7%	82.9%	83.3%	80.0%	76.0%	26	29	25	24	19
65	A	81.3%	122	76.7%	94.3%	80.0%	80.0%	72.0%	23	33	24	24	18
67	A	81.3%	122	83.3%	82.9%	83.3%	80.0%	76.0%	25	29	25	24	19
81	A	81.3%	122	70.0%	91.4%	86.7%	86.7%	68.0%	21	32	26	26	17
82	B	81.3%	122	76.7%	85.7%	76.7%	83.3%	84.0%	23	30	23	25	21
2	B	80.7%	121	86.7%	88.6%	83.3%	80.0%	60.0%	26	31	25	24	15
48	B	80.7%	121	90.0%	88.6%	80.0%	76.7%	64.0%	27	31	24	23	16
79	A	80.0%	120	83.3%	88.6%	76.7%	80.0%	68.0%	25	31	23	24	17
17	A	79.3%	119	80.0%	85.7%	86.7%	76.7%	64.0%	24	30	26	23	16
59	A	79.3%	119	70.0%	82.9%	83.3%	83.3%	76.0%	21	29	25	25	19
69	A	79.3%	119	80.0%	82.9%	80.0%	80.0%	72.0%	24	29	24	24	18
75	A	79.3%	119	73.3%	82.9%	86.7%	86.7%	64.0%	22	29	26	26	16
20	B	78.7%	118	83.3%	82.9%	76.7%	80.0%	68.0%	25	29	23	24	17
43	A	78.7%	118	73.3%	88.6%	76.7%	86.7%	64.0%	22	31	23	26	16
36	B	78.0%	117	83.3%	88.6%	83.3%	73.3%	56.0%	25	31	25	22	14
39	A	78.0%	117	83.3%	74.3%	96.7%	70.0%	64.0%	25	26	29	21	16
73	A	78.0%	117	80.0%	80.0%	93.3%	70.0%	64.0%	24	28	28	21	16
92	B	78.0%	117	80.0%	80.0%	86.7%	73.3%	68.0%	24	28	26	22	17
97	A	78.0%	117	66.7%	82.9%	93.3%	80.0%	64.0%	20	29	28	24	16
60	B	77.3%	116	73.3%	91.4%	73.3%	76.7%	68.0%	22	32	22	23	17
16	B	76.7%	115	76.7%	82.9%	83.3%	66.7%	72.0%	23	29	25	20	18
23	A	76.7%	115	73.3%	74.3%	93.3%	70.0%	72.0%	22	26	28	21	18
35	A	76.7%	115	80.0%	74.3%	86.7%	73.3%	68.0%	24	26	26	22	17
78	B	76.7%	115	73.3%	82.9%	80.0%	70.0%	76.0%	22	29	24	21	19
4	B	76.0%	114	73.3%	88.6%	83.3%	70.0%	60.0%	22	31	25	21	15
5	A	76.0%	114	73.3%	80.0%	86.7%	76.7%	60.0%	22	28	26	23	15
25	A	76.0%	114	76.7%	82.9%	83.3%	70.0%	64.0%	23	29	25	21	16
49	A	76.0%	114	70.0%	82.9%	80.0%	76.7%	68.0%	21	29	24	23	17
26	B	75.3%	113	73.3%	71.4%	76.7%	83.3%	72.0%	22	25	23	25	18
37	A	75.3%	113	70.0%	77.1%	83.3%	76.7%	68.0%	21	27	25	23	17
51	A	75.3%	113	66.7%	85.7%	76.7%	73.3%	72.0%	20	30	23	22	18
42	B	74.7%	112	80.0%	82.9%	76.7%	73.3%	56.0%	24	29	23	22	14
76	B	74.7%	112	80.0%	80.0%	66.7%	70.0%	76.0%	24	28	20	21	19
83	A	74.7%	112	66.7%	82.9%	63.3%	83.3%	76.0%	20	29	19	25	19
96	B	74.7%	112	76.7%	82.9%	76.7%	70.0%	64.0%	23	29	23	21	16
91	A	74.0%	111	80.0%	77.1%	80.0%	80.0%	48.0%	24	27	24	24	12
15	A	73.3%	110	76.7%	74.3%	76.7%	70.0%	68.0%	23	26	23	21	17
72	B	73.3%	110	73.3%	88.6%	76.7%	63.3%	60.0%	22	31	23	19	15
100	B	73.3%	110	80.0%	80.0%	66.7%	70.0%	68.0%	24	28	20	21	17
6	B	72.0%	108	63.3%	82.9%	66.7%	76.7%	68.0%	19	29	20	23	17
68	B	72.0%	108	70.0%	82.9%	73.3%	70.0%	60.0%	21	29	22	21	15
74	B	72.0%	108	60.0%	85.7%	70.0%	76.7%	64.0%	18	30	21	23	16
94	B	72.0%	108	76.7%	91.4%	66.7%	53.3%	68.0%	23	32	20	16	17
12	B	71.3%	107	60.0%	85.7%	76.7%	63.3%	68.0%	18	30	23	19	17
13	A	71.3%	107	63.3%	62.9%	76.7%	76.7%	80.0%	19	22	23	23	20
66	B	71.3%	107	73.3%	80.0%	73.3%	63.3%	64.0%	22	28	22	19	16
31	A	70.7%	106	60.0%	80.0%	76.7%	76.7%	56.0%	18	28	23	23	14
61	A	70.7%	106	56.7%	71.4%	86.7%	70.0%	68.0%	17	25	26	21	17
80	B	70.7%	106	66.7%	74.3%	73.3%	76.7%	60.0%	20	26	22	23	15
86	B	70.7%	106	70.0%	91.4%	70.0%	56.7%	60.0%	21	32	21	17	15
89	A	70.7%	106	66.7%	80.0%	73.3%	60.0%	72.0%	20	28	22	18	18
99	A	70.7%	106	60.0%	74.3%	76.7%	76.7%	64.0%	18	26	23	23	16
14	B	70.0%	105	56.7%	82.9%	76.7%	70.0%	60.0%	17	29	23	21	15
46	B	70.0%	105	70.0%	77.1%	73.3%	70.0%	56.0%	21	27	22	21	14
18	B	69.3%	104	80.0%	82.9%	76.7%	53.3%	48.0%	24	29	23	16	12
52	B	69.3%	104	70.0%	80.0%	70.0%	56.7%	68.0%	21	28	21	17	17
56	B	69.3%	104	73.3%	82.9%	66.7%	70.0%	48.0%	22	29	20	21	12
87	A	69.3%	104	73.3%	60.0%	76.7%	73.3%	64.0%	22	21	23	22	16
1	A	68.7%	103	56.7%	68.6%	83.3%	80.0%	52.0%	17	24	25	24	13
10	B	68.7%	103	83.3%	62.9%	76.7%	66.7%	52.0%	25	22	23	20	13
57	A	68.7%	103	56.7%	77.1%	70.0%	63.3%	76.0%	17	27	21	19	19
70	B	68.7%	103	53.3%	85.7%	66.7%	73.3%	60.0%	16	30	20	22	15
9	A	68.0%	102	66.7%	74.3%	66.7%	73.3%	56.0%	20	26	20	22	14
29	A	68.0%	102	60.0%	68.6%	73.3%	70.0%	68.0%	18	24	22	21	17
84	B	68.0%	102	83.3%	74.3%	60.0%	60.0%	60.0%	25	26	18	18	15

Student	Form	Overall Percentage	Overall Score	Domain 1 Percentage	Domain 2 Percentage	Domain 3 Percentage	Domain 4 Percentage	Domain 5 Percentage	Domain 1 Score	Domain 2 Score	Domain 3 Score	Domain 4 Score	Domain 5 Score
3	A	67.3%	101	63.3%	71.4%	76.7%	60.0%	64.0%	19	25	23	18	16
11	A	67.3%	101	66.7%	77.1%	73.3%	63.3%	52.0%	20	27	22	19	13
34	B	67.3%	101	70.0%	77.1%	63.3%	56.7%	68.0%	21	27	19	17	17
88	B	67.3%	101	50.0%	68.6%	76.7%	76.7%	64.0%	15	24	23	23	16
90	B	67.3%	101	56.7%	85.7%	80.0%	50.0%	60.0%	17	30	24	15	15
45	A	66.7%	100	63.3%	71.4%	80.0%	63.3%	52.0%	19	25	24	19	13
93	A	66.7%	100	66.7%	60.0%	63.3%	80.0%	64.0%	20	21	19	24	16
21	A	66.0%	99	63.3%	68.6%	70.0%	70.0%	56.0%	19	24	21	21	14
22	B	66.0%	99	66.7%	77.1%	73.3%	50.0%	60.0%	20	27	22	15	15
30	B	66.0%	99	60.0%	57.1%	76.7%	73.3%	64.0%	18	20	23	22	16
50	B	66.0%	99	63.3%	71.4%	70.0%	66.7%	56.0%	19	25	21	20	14
58	B	66.0%	99	66.7%	68.6%	60.0%	70.0%	64.0%	20	24	18	21	16
28	B	65.3%	98	60.0%	85.7%	66.7%	60.0%	48.0%	18	30	20	18	12
53	A	65.3%	98	63.3%	57.1%	80.0%	66.7%	60.0%	19	20	24	20	15
63	A	64.7%	97	63.3%	68.6%	83.3%	56.7%	48.0%	19	24	25	17	12
40	B	64.0%	96	50.0%	71.4%	66.7%	56.7%	76.0%	15	25	20	17	19
47	A	64.0%	96	50.0%	68.6%	60.0%	70.0%	72.0%	15	24	18	21	18
95	A	64.0%	96	56.7%	62.9%	70.0%	70.0%	60.0%	17	22	21	21	15
41	A	63.3%	95	46.7%	71.4%	56.7%	66.7%	76.0%	14	25	17	20	19
8	B	62.7%	94	53.3%	68.6%	63.3%	60.0%	68.0%	16	24	19	18	17
27	A	61.3%	92	43.3%	77.1%	53.3%	73.3%	56.0%	13	27	16	22	14
38	B	61.3%	92	60.0%	71.4%	76.7%	43.3%	52.0%	18	25	23	13	13
33	A	60.7%	91	56.7%	68.6%	66.7%	53.3%	56.0%	17	24	20	16	14
62	B	60.7%	91	53.3%	74.3%	66.7%	46.7%	60.0%	16	26	20	14	15
71	A	58.7%	88	56.7%	51.4%	60.0%	63.3%	64.0%	17	18	18	19	16
77	A	58.7%	88	43.3%	65.7%	66.7%	50.0%	68.0%	13	23	20	15	17
85	A	58.7%	88	56.7%	71.4%	56.7%	50.0%	56.0%	17	25	17	15	14
19	A	58.0%	87	60.0%	54.3%	60.0%	53.3%	64.0%	18	19	18	16	16
44	B	56.7%	85	56.7%	60.0%	63.3%	50.0%	52.0%	17	21	19	15	13
24	B	56.0%	84	50.0%	62.9%	56.7%	60.0%	48.0%	15	22	17	18	12
98	B	52.7%	79	50.0%	48.6%	63.3%	46.7%	56.0%	15	17	19	14	14
32	B	52.0%	78	40.0%	57.1%	53.3%	46.7%	64.0%	12	20	16	14	16



Section B: Question Analysis

Sorted by Exam Form and Question Number

Form	Questions	QuestionPercent
A	1	16.0%
A	2	76.0%
A	3	42.0%
A	4	94.0%
A	5	84.0%
A	6	70.0%

Form	Questions	QuestionPercent
A	7	78.0%
A	8	88.0%
A	9	100.0%
A	10	50.0%
A	11	30.0%
A	12	66.0%
A	13	76.0%
A	14	66.0%
A	15	66.0%
A	16	46.0%
A	17	82.0%
A	18	52.0%
A	19	28.0%
A	20	88.0%
A	21	74.0%
A	22	98.0%
A	23	32.0%
A	24	96.0%
A	25	36.0%
A	26	78.0%
A	27	76.0%
A	28	56.0%
A	29	80.0%
A	30	28.0%
A	31	94.0%
A	32	94.0%
A	33	54.0%
A	34	54.0%
A	35	52.0%
A	36	42.0%
A	37	86.0%
A	38	98.0%
A	39	100.0%
A	40	90.0%
A	41	90.0%
A	42	52.0%
A	43	78.0%
A	44	38.0%
A	45	94.0%
A	46	90.0%
A	47	84.0%
A	48	72.0%
A	49	84.0%
A	50	68.0%
A	51	94.0%
A	52	76.0%
A	53	80.0%
A	54	82.0%
A	55	34.0%
A	56	54.0%
A	57	94.0%
A	58	82.0%
A	59	96.0%
A	60	98.0%
A	61	98.0%
A	62	86.0%
A	63	34.0%
A	64	98.0%
A	65	96.0%
A	66	92.0%
A	67	96.0%
A	68	88.0%
A	69	38.0%
A	70	86.0%
A	71	98.0%
A	72	92.0%
A	73	68.0%
A	74	68.0%
A	75	68.0%

Form	Questions	QuestionPercent
A	76	86.0%
A	77	64.0%
A	78	60.0%
A	79	96.0%
A	80	72.0%
A	81	98.0%
A	82	30.0%
A	83	90.0%
A	84	52.0%
A	85	94.0%
A	86	90.0%
A	87	90.0%
A	88	80.0%
A	89	96.0%
A	90	12.0%
A	91	56.0%
A	92	96.0%
A	93	84.0%
A	94	16.0%
A	95	98.0%
A	96	90.0%
A	97	78.0%
A	98	36.0%
A	99	8.0%
A	100	54.0%
A	101	100.0%
A	102	100.0%
A	103	96.0%
A	104	58.0%
A	105	60.0%
A	106	40.0%
A	107	86.0%
A	108	96.0%
A	109	88.0%
A	110	52.0%
A	111	60.0%
A	112	76.0%
A	113	52.0%
A	114	56.0%
A	115	88.0%
A	116	40.0%
A	117	54.0%
A	118	94.0%
A	119	68.0%
A	120	24.0%
A	121	70.0%
A	122	96.0%
A	123	66.0%
A	124	96.0%
A	125	14.0%
A	126	18.0%
A	127	20.0%
A	128	58.0%
A	129	100.0%
A	130	98.0%
A	131	94.0%
A	132	92.0%
A	133	90.0%
A	134	68.0%
A	135	98.0%
A	136	84.0%
A	137	88.0%
A	138	60.0%
A	139	8.0%
A	140	66.0%
A	141	74.0%
A	142	94.0%
A	143	92.0%
A	144	76.0%

Form	Questions	QuestionPercent
A	145	96.0%
A	146	78.0%
A	147	100.0%
A	148	6.0%
A	149	76.0%
A	150	88.0%
B	1	6.1%
B	2	36.7%
B	3	83.7%
B	4	100.0%
B	5	51.0%
B	6	73.5%
B	7	36.7%
B	8	67.3%
B	9	63.3%
B	10	61.2%
B	11	91.8%
B	12	20.4%
B	13	89.8%
B	14	100.0%
B	15	98.0%
B	16	71.4%
B	17	83.7%
B	18	93.9%
B	19	75.5%
B	20	100.0%
B	21	77.6%
B	22	85.7%
B	23	71.4%
B	24	75.5%
B	25	93.9%
B	26	100.0%
B	27	59.2%
B	28	59.2%
B	29	75.5%
B	30	57.1%
B	31	95.9%
B	32	93.9%
B	33	93.9%
B	34	98.0%
B	35	63.3%
B	36	91.8%
B	37	87.8%
B	38	38.8%
B	39	69.4%
B	40	95.9%
B	41	98.0%
B	42	93.9%
B	43	26.5%
B	44	61.2%
B	45	98.0%
B	46	87.8%
B	47	55.1%
B	48	89.8%
B	49	69.4%
B	50	16.3%
B	51	67.3%
B	52	14.3%
B	53	63.3%
B	54	75.5%
B	55	65.3%
B	56	91.8%
B	57	32.7%
B	58	100.0%
B	59	79.6%
B	60	55.1%
B	61	95.9%
B	62	61.2%
B	63	73.5%

Form	Questions	QuestionPercent
B	64	83.7%
B	65	95.9%
B	66	93.9%
B	67	95.9%
B	68	81.6%
B	69	24.5%
B	70	14.3%
B	71	89.8%
B	72	91.8%
B	73	59.2%
B	74	67.3%
B	75	91.8%
B	76	59.2%
B	77	24.5%
B	78	63.3%
B	79	81.6%
B	80	75.5%
B	81	63.3%
B	82	30.6%
B	83	4.1%
B	84	55.1%
B	85	14.3%
B	86	32.7%
B	87	40.8%
B	88	91.8%
B	89	77.6%
B	90	14.3%
B	91	73.5%
B	92	95.9%
B	93	10.2%
B	94	91.8%
B	95	30.6%
B	96	98.0%
B	97	53.1%
B	98	100.0%
B	99	55.1%
B	100	91.8%
B	101	75.5%
B	102	75.5%
B	103	91.8%
B	104	81.6%
B	105	83.7%
B	106	79.6%
B	107	59.2%
B	108	79.6%
B	109	91.8%
B	110	83.7%
B	111	89.8%
B	112	100.0%
B	113	87.8%
B	114	61.2%
B	115	14.3%
B	116	91.8%
B	117	63.3%
B	118	91.8%
B	119	26.5%
B	120	51.0%
B	121	91.8%
B	122	91.8%
B	123	100.0%
B	124	81.6%
B	125	8.2%
B	126	89.8%
B	127	65.3%
B	128	34.7%
B	129	95.9%
B	130	75.5%
B	131	40.8%
B	132	91.8%

Form	Questions	QuestionPercent
B	133	59.2%
B	134	73.5%
B	135	93.9%
B	136	89.8%
B	137	16.3%
B	138	79.6%
B	139	98.0%
B	140	4.1%
B	141	91.8%
B	142	95.9%
B	143	42.9%
B	144	93.9%
B	145	53.1%
B	146	28.6%
B	147	98.0%
B	148	85.7%
B	149	91.8%
B	150	100.0%

Section B: Question Analysis
Sorted by Question Percentage

Obs	QuestionPercent	Form	Questions
1	100.0%	A	9
2	100.0%	A	39
3	100.0%	A	101
4	100.0%	A	102
5	100.0%	A	129
6	100.0%	A	147
7	100.0%	B	4
8	100.0%	B	14
9	100.0%	B	20
10	100.0%	B	26
11	100.0%	B	58
12	100.0%	B	98
13	100.0%	B	112
14	100.0%	B	123
15	100.0%	B	150
16	98.0%	A	22
17	98.0%	A	38
18	98.0%	A	60
19	98.0%	A	61
20	98.0%	A	64
21	98.0%	A	71
22	98.0%	A	81
23	98.0%	A	95
24	98.0%	A	130
25	98.0%	A	135
26	98.0%	B	15
27	98.0%	B	34
28	98.0%	B	41
29	98.0%	B	45
30	98.0%	B	96
31	98.0%	B	139
32	98.0%	B	147
33	96.0%	A	24
34	96.0%	A	59
35	96.0%	A	65
36	96.0%	A	67
37	96.0%	A	79
38	96.0%	A	89
39	96.0%	A	92
40	96.0%	A	103
41	96.0%	A	108
42	96.0%	A	122
43	96.0%	A	124
44	96.0%	A	145
45	95.9%	B	31

Obs	QuestionPercent	Form	Questions
46	95.9%	B	40
47	95.9%	B	61
48	95.9%	B	65
49	95.9%	B	67
50	95.9%	B	92
51	95.9%	B	129
52	95.9%	B	142
53	94.0%	A	4
54	94.0%	A	31
55	94.0%	A	32
56	94.0%	A	45
57	94.0%	A	51
58	94.0%	A	57
59	94.0%	A	85
60	94.0%	A	118
61	94.0%	A	131
62	94.0%	A	142
63	93.9%	B	18
64	93.9%	B	25
65	93.9%	B	32
66	93.9%	B	33
67	93.9%	B	42
68	93.9%	B	66
69	93.9%	B	135
70	93.9%	B	144
71	92.0%	A	66
72	92.0%	A	72
73	92.0%	A	132
74	92.0%	A	143
75	91.8%	B	11
76	91.8%	B	36
77	91.8%	B	56
78	91.8%	B	72
79	91.8%	B	75
80	91.8%	B	88
81	91.8%	B	94
82	91.8%	B	100
83	91.8%	B	103
84	91.8%	B	109
85	91.8%	B	116
86	91.8%	B	118
87	91.8%	B	121
88	91.8%	B	122
89	91.8%	B	132
90	91.8%	B	141
91	91.8%	B	149
92	90.0%	A	40
93	90.0%	A	41
94	90.0%	A	46
95	90.0%	A	83
96	90.0%	A	86
97	90.0%	A	87
98	90.0%	A	96
99	90.0%	A	133
100	89.8%	B	13
101	89.8%	B	48
102	89.8%	B	71
103	89.8%	B	111
104	89.8%	B	126
105	89.8%	B	136
106	88.0%	A	8
107	88.0%	A	20
108	88.0%	A	68
109	88.0%	A	109
110	88.0%	A	115
111	88.0%	A	137
112	88.0%	A	150
113	87.8%	B	37
114	87.8%	B	46

Obs	QuestionPercent	Form	Questions
115	87.8%	B	113
116	86.0%	A	37
117	86.0%	A	62
118	86.0%	A	70
119	86.0%	A	76
120	86.0%	A	107
121	85.7%	B	22
122	85.7%	B	148
123	84.0%	A	5
124	84.0%	A	47
125	84.0%	A	49
126	84.0%	A	93
127	84.0%	A	136
128	83.7%	B	3
129	83.7%	B	17
130	83.7%	B	64
131	83.7%	B	105
132	83.7%	B	110
133	82.0%	A	17
134	82.0%	A	54
135	82.0%	A	58
136	81.6%	B	68
137	81.6%	B	79
138	81.6%	B	104
139	81.6%	B	124
140	80.0%	A	29
141	80.0%	A	53
142	80.0%	A	88
143	79.6%	B	59
144	79.6%	B	106
145	79.6%	B	108
146	79.6%	B	138
147	78.0%	A	7
148	78.0%	A	26
149	78.0%	A	43
150	78.0%	A	97
151	78.0%	A	146
152	77.6%	B	21
153	77.6%	B	89
154	76.0%	A	2
155	76.0%	A	13
156	76.0%	A	27
157	76.0%	A	52
158	76.0%	A	112
159	76.0%	A	144
160	76.0%	A	149
161	75.5%	B	19
162	75.5%	B	24
163	75.5%	B	29
164	75.5%	B	54
165	75.5%	B	80
166	75.5%	B	101
167	75.5%	B	102
168	75.5%	B	130
169	74.0%	A	21
170	74.0%	A	141
171	73.5%	B	6
172	73.5%	B	63
173	73.5%	B	91
174	73.5%	B	134
175	72.0%	A	48
176	72.0%	A	80
177	71.4%	B	16
178	71.4%	B	23
179	70.0%	A	6
180	70.0%	A	121
181	69.4%	B	39
182	69.4%	B	49
183	68.0%	A	50

Obs	QuestionPercent	Form	Questions
184	68.0%	A	73
185	68.0%	A	74
186	68.0%	A	75
187	68.0%	A	119
188	68.0%	A	134
189	67.3%	B	8
190	67.3%	B	51
191	67.3%	B	74
192	66.0%	A	12
193	66.0%	A	14
194	66.0%	A	15
195	66.0%	A	123
196	66.0%	A	140
197	65.3%	B	55
198	65.3%	B	127
199	64.0%	A	77
200	63.3%	B	9
201	63.3%	B	35
202	63.3%	B	53
203	63.3%	B	78
204	63.3%	B	81
205	63.3%	B	117
206	61.2%	B	10
207	61.2%	B	44
208	61.2%	B	62
209	61.2%	B	114
210	60.0%	A	78
211	60.0%	A	105
212	60.0%	A	111
213	60.0%	A	138
214	59.2%	B	27
215	59.2%	B	28
216	59.2%	B	73
217	59.2%	B	76
218	59.2%	B	107
219	59.2%	B	133
220	58.0%	A	104
221	58.0%	A	128
222	57.1%	B	30
223	56.0%	A	28
224	56.0%	A	91
225	56.0%	A	114
226	55.1%	B	47
227	55.1%	B	60
228	55.1%	B	84
229	55.1%	B	99
230	54.0%	A	33
231	54.0%	A	34
232	54.0%	A	56
233	54.0%	A	100
234	54.0%	A	117
235	53.1%	B	97
236	53.1%	B	145
237	52.0%	A	18
238	52.0%	A	35
239	52.0%	A	42
240	52.0%	A	84
241	52.0%	A	110
242	52.0%	A	113
243	51.0%	B	5
244	51.0%	B	120
245	50.0%	A	10
246	46.0%	A	16
247	42.9%	B	143
248	42.0%	A	3
249	42.0%	A	36
250	40.8%	B	87
251	40.8%	B	131
252	40.0%	A	106

Obs	QuestionPercent	Form	Questions
253	40.0%	A	116
254	38.8%	B	38
255	38.0%	A	44
256	38.0%	A	69
257	36.7%	B	2
258	36.7%	B	7
259	36.0%	A	25
260	36.0%	A	98
261	34.7%	B	128
262	34.0%	A	55
263	34.0%	A	63
264	32.7%	B	57
265	32.7%	B	86
266	32.0%	A	23
267	30.6%	B	82
268	30.6%	B	95
269	30.0%	A	11
270	30.0%	A	82
271	28.6%	B	146
272	28.0%	A	19
273	28.0%	A	30
274	26.5%	B	43
275	26.5%	B	119
276	24.5%	B	69
277	24.5%	B	77
278	24.0%	A	120
279	20.4%	B	12
280	20.0%	A	127
281	18.0%	A	126
282	16.3%	B	50
283	16.3%	B	137
284	16.0%	A	1
285	16.0%	A	94
286	14.3%	B	52
287	14.3%	B	70
288	14.3%	B	85
289	14.3%	B	90
290	14.3%	B	115
291	14.0%	A	125
292	12.0%	A	90
293	10.2%	B	93
294	8.2%	B	125
295	8.0%	A	99
296	8.0%	A	139
297	6.1%	B	1
298	6.0%	A	148
299	4.1%	B	83
300	4.1%	B	140