**STA502**

**Homework 9**

**Lina Lee**

**Question1**

**SAS code**

/\*header

Purpose: Summary for loan appllication

Input: loanapp.sas7bdat/

libname loan="C:\Users\linal\Desktop\2018\STA502WHW9";

ods rtf file="C:\Users\linal\Desktop\2018\STA502\HW9\problem1" bodytitle style=journal;

**data** loan.loanapp;

set loanapp;

**run**;

title " Summary for Loan Applications with Less Than 5% Down";

**proc** **sql**;

select

case

when branch=**1** then "LIV925" else

case

when branch=**2** then "SV408" else

case

when branch=**3** then "SLO805" else

case

when branch=**4** then "GLN626"

else "COR760"

end

end

end

end

as branchname label="Branch name",

sum(LoanApproved) as nbapproval label="Number of loans approvals",

count(FirstName) as loanapp label="Number of total loan applications",

(sum(LoanApproved)/count(FirstName)) as percet format=percent14.3 label="Percent of loan approvals"

from loanapp

where PercentDown<**0.05**

group by branch;

**quit**;

/\*dollar sign\*/

title " Summary for approved loan: mean loan amount, mean home price, median creditscore";

**proc** **sql**;

select

case

when branch=**1** then "LIV925" else

case

when branch=**2** then "SV408" else

case

when branch=**3** then "SLO805" else

case

when branch=**4** then "GLN626"

else "COR760"

end

end

end

end

as branchname label="Branch name",

count(FirstName) as loanapp label="Number of loan applications",

avg(LoanAmt) as avgamt format=dollar14.3 label="Mean loan amount",avg(Price) as avgprice format=dollar14.3 label="Mean home price",

median(creditscore) as credit label="Median credit score"

from loanapp

where LoanApproved=**1**

group by branch;

**quit**;

**Result:**

1. **refer to the table1 below**

***Table1: Summary for Loan Applications with Less Than 5% Down***

| *Branch name* | *Number of loans approvals* | *Number of total loan applications* | *Percent of loan approvals* |
| --- | --- | --- | --- |
| LIV925 | 93 | 141 | 65.957% |
| SV408 | 81 | 173 | 46.821% |
| SLO805 | 74 | 156 | 47.436% |
| GLN626 | 120 | 145 | 82.759% |
| COR760 | 77 | 116 | 66.379% |

1. **refer to the table 2**

***Table2: Summary for approved loan: mean loan amount, mean home price, median credit score***

| *Branch name* | *Number of loan applications* | *Mean loan amount* | *Mean home price* | *Median credit score* |
| --- | --- | --- | --- | --- |
| LIV925 | 718 | $420,949.861 | $493,626.462 | 720 |
| SV408 | 473 | $446,957.082 | $516,975.899 | 717 |
| SLO805 | 434 | $409,972.581 | $475,558.525 | 720 |
| GLN626 | 834 | $494,068.825 | $575,320.024 | 703 |
| COR760 | 660 | $387,342.273 | $451,313.636 | 719 |

**Question2**

**SAS code**

/\*header

Purpose: Summary of cases reported on the first day of July and August

Input: sff.sas7bdat/

libname report="C:\Users\linal\Desktop\2018\STA502WHW9";

ods rtf file="C:\Users\linal\Desktop\2018\STA502\HW9\problem2" bodytitle style=journal;

**data** report.sff;

set sff;

**run**;

title "Summary of cases reported on the first day of July";

**proc** **sql**;

create table casedata as

select continent as conti label="Continent",

count(country) as countrynb label="Number of countries",

sum(July) as Julynb label="Sum of cumulative cases reported on the first day of the month for July"

from sff

group by continent;

**quit**;

**proc** **print** data=casedata label;

title "Summary of cases reported on the first day of August";

**proc** **sql**;

select continent as conti label="Continent",

sum(

case

when aug =**.** then **1**

else **0**

end

)

as nocase label="Number of countries reported no cases",

sum(

case

when aug > **0** then **1**

else **0**

end

)

as cases label="Number of countreis reported cases",

sum(

case

when aug > **0** then aug

else **0**

end

)

as augcumsum label="Sum of cumulative cases reported on the first day of August"

from sff

group by continent;

**quit**;

ods rtf close;

**result:**

1. **refer to the table 3 below**

***Table 3 Summary of cases reported on the first day of July***

| *Obs* | *Continent* | *Number of countries* | *Sum of cumulative cases reported on the first day of the month for July* |
| --- | --- | --- | --- |
| *1* | Africa | 24 | 70 |
| *2* | Asia | 40 | 7207 |
| *3* | Australia | 16 | 4814 |
| *4* | Europe | 50 | 9494 |
| *5* | North America | 35 | 46257 |
| *6* | South America | 14 | 9972 |

1. **refer to the table 4 below**

***Table 4 Summary of cases reported on the first day of August***

| *Continent* | *Number of countries reported no cases* | *Number of countreis reported cases* | *Sum of cumulative cases reported on the first day of August* |
| --- | --- | --- | --- |
| Africa | 4 | 20 | 972 |
| Asia | 1 | 39 | 35932 |
| Australia | 3 | 13 | 25244 |
| Europe | 2 | 48 | 29725 |
| North America | 1 | 34 | 74408 |
| South America | 1 | 13 | 24145 |

**Question3**

**SAS code**

/\*header

Purpose: Combine the two SAS data sets so that the district rating is properly assigned to each teacher

Input: Teachers.sas7bdat, district.sas7bdat\*/

libname loan="C:\Users\linal\Desktop\2018\STA502WHW9";

ods rtf file="C:\Users\linal\Desktop\2018\STA502\HW9\problem3" bodytitle style=journal;

**data** rating.District;

set District;

**run**;

**data** rating.Teachers;

set Teachers;

**run**;

title "The district rating for 10 elementary teachers";

**proc** **sql**;

select Teachers.teacher,District.\*

from Teachers as a,district as b

where a.teacherscore=b.TS

and a.CurriculumGrd=b.CG

order by a.teacher;

**quit**;

ods rtf close;

**result: refer to the table 5 below**

***Table5: The district rating for 10 elementary teachers***

| *Teacher Name* | *Teacher score* | *Curriculum grade* | *District rating* |
| --- | --- | --- | --- |
| Allan, C. | 1 | F | Poor |
| Bryant, A. | 2 | C | Needs Improvement |
| Cox, P. | 5 | B | Outstanding |
| Harris, T. | 2 | C | Needs Improvement |
| Jones, K. | 4 | B | Great |
| Moore, P. | 2 | C | Needs Improvement |
| Payne, D. | 5 | C | Great |
| Reed, C. | 2 | A | Fair |
| Shaw, M. | 3 | C | Fair |
| Young, R. | 5 | C | Great |