

/\* Task1 \*/

/\* Step 1: Import data from Excel Sheet \*/

```
filename reffile '/home/u64004813/STAT.xlsx';
proc import datafile = reffile
dbms = xlsx
out = stat;
getnames = yes;
run;
```

```
filename reffile '/home/u64004813/HIST.xlsx';
proc import datafile = reffile
dbms = xlsx
out = hist;
getnames = yes;
run;
```

```
filename reffile '/home/u64004813/STUDHT.xlsx';
proc import datafile = reffile
dbms = xlsx
out = studht;
getnames = yes;
run;
```

/\* Step 2: Stack data from STAT and HIST \*/

```
data stathist;
set stat hist;
run;
```

/\* Step 3: Merge STUDHT to STATHIST \*/

```
proc sort data = stathist;
by name;
proc sort data=studht;
by name;
```

```
data statall;
merge stathist studht;
by name;
run;
```

/\* Step 4: Convert weight and height into Metric System; \*/

```
data statall1;
set statall;

weightKg=weight*.454;
heightm=height*2.54/100;
```

/\*Step 5: Derive BMI \*/

```
bmi=weightKg/(heightm*heightm);
```

/\* Step 6: Derive the staus variable \*/

```
if bmi<=18 then status='Underweight';
else if 18<=bmi<20 then status='Healthy';
else if 20<=bmi<22 then status='Overweight';
else if bmi>=22 then status = 'Obese';
run;
```

/\* Step 7: Generate the pie chart for STATUS Variable \*/

```
proc chart data = statall1;
pie status;
run;
```

/\* ----- \*/

/\* Task2 \*/

/\* Step 8: Create freq. dist. table \*/

```
proc freq data = statall1;
tables gender*status /out = myFreqTable;
run;
```

/\* Step 9: Create report format \*/

```
data myFreqtable1;
set myfreqtable;
value = cat(count, '(', round(percent, .01), '%)');
```

```
        drop count percent;
run;

/* Step 10: Transposing variable */
proc transpose data = myFreqtable1 out=t_myfreq;
by gender;
id status;
var value;
run;

/* Step 11: Create final report */
title 'Report of Frequency Table';
proc print data = t_myfreq(drop=_name_);
run;

/* ----- */

/* Task3 */

%macro myStat(var1, var2);

/* Step 12: Create freq. dist. table */
proc freq data = stata11 noprint;
tables &var1*&var2 /out =myFreqTable;
run;

/*Step 13: create report format*/
data myfreqtable1;
set myfreqtable;
value = cat(count, '(', round(percent,.01), '%)');
drop count percent;
run;

/*Step 14: transposing variable*/
proc transpose data = myfreqtable1 out = t_myfreq;
by &var1;
id &var2;
var value;
run;

/*Step 15: Create final report*/
title 'Report of Frequency table';
```