```sas
/* Importing the csv file into SAS work library and naming the data survery_data */

FILENAME REFFILE '/home/u63998079/Class/Screen Time and Sleep Hours Survey.csv';

PROC IMPORT DATAFILE=REFFILE
    DBMS=CSV
    OUT=survey_data;
    GETNAMES=YES;
RUN;

PROC CONTENTS DATA=survey_data; RUN;

/* Checking correlation between quantitative values? */
proc corr data=survey_data pearson spearman nosimple;
var Age Screentime Sleephours;
run;

/*I used the following procecdures to visualize outliers and clean my data */
/* Since my data had really bad correlation */

proc gplot data=survey_data;
Plot Age*Screentime;
Run;

proc reg data=survey_data;
Model Screentime = Age;
Run;

/* Printing dataset and checking its contents */

proc print data=survey_data;
run;

/* For our quantitative variables (Age, Screentime and Sleephours) */
/* Calculating the mean, median, standard deviation, IQR, maximum value, and minimum value */

proc means data=survey_data mean median std qrange max min maxdec=2;
    var Age Screentime Sleephours;
run;

/* For our qualitative variables (Gender, Activity, App and Sleepquality)  */
/* created a frequency table */
proc freq data=survey_data;
    tables Gender Activity App Sleepquality/ nocum;
run;

/* Generating histograms  */
/* For our quantitative variables (Age, Screentime and Sleephours) */

/* Histogram for Age */
proc univariate data=survey_data;
    var Age;
    histogram;
    title "Histogram of the Age of Participants";
run;

/* Histogram for Screentime */
proc univariate data=survey_data;
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    var Screentime;
    histogram;
    title "Histogram of the Average Weekly Screen Time (phone)";
run;


/* Histogram for Sleephours*/
proc univariate data=survey_data;
var sleephours;
histogram;
title "Histogram of the Average Sleep Hours per Night";
run;


/* For our quantitative variables (Age, Screentime and Sleephours) */
/* Generating Bar charts */


/* Bar Chart of Gender */
proc gchart data=survey_data;
vbar gender / discrete;
title "Bar Chart of Gender";
run;


/* Bar Chart of Phone Activity */
proc gchart data=survey_data;
vbar activity / discrete;
title "Bar Chart of Phone Activity";
run;

/* Bar Chart of Apps mostly used */
proc gchart data=survey_data;
vbar app / discrete;
title "Bar Chart of Apps mostly used";
run;


/* Bar Chart of sleep quality */
proc gchart data=survey_data;
vbar sleepquality / discrete;
title "Bar Chart sleep quality";
run;


/* Linear Regression */

/* Regression with only numeric variables */
proc reg data=survey_data;
    model Sleephours = Age Screentime;
run;


/* Creating dummy variables and Regression with at least one qualitative variable */
data dummy_survey;
set survey_data;

if Gender = 'Other' then do;
Gender_Other=1;
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Gender_Male = 0;
End;

else if Gender = 'Male' then do;
Gender_Other=0;
Gender_Male = 1;
End;

else do;
Gender_Other=0;
Gender_Male = 0;
End;

Run;

proc reg data=dummy_survey;
    model Sleephours = Age Screentime Gender_male Gender_Other;
run;


/* Regression with all of the variables using dummy variables */
/* Creating dummy variables for variable Activity */
data dummy_survey_activity;
set dummy_survey;
if Activity = 'Gaming' then do;
A1=1; A2=0; A3=0; A4=0;
end;

else if Activity = 'Streaming' then do;
A1=0; A2=1; A3=0; A4=0;
end;

else if Activity = 'Work' then do;
A1=0; A2=0; A3=1; A4=0;
end;

else if Activity = 'Messaging' then do;
A1=0; A2=0; A3=0; A4=1;
end;

else do;
A1=0; A2=0; A3=0; A4=0;
end;
Run;

/* Creating dummy variables for variable sleepquality */
data dummy_survey_sleepquality;
set dummy_survey_activity;
if Sleepquality = 'Fair' then do;
S1=1; S2=0;
end;

else if Sleepquality = 'Very good' then do;
S1=0; S2=1;
end;

else do;
S1=0; S2=0;
end;
```

```
Run;
```

```
proc reg data=dummy_survey_sleepquality;
model Sleephours = Age Screentime S1 S2 A1 A2 A3 A4 Gender_male Gender_Other;
run;
```