Assignment -4

```
dm 'log; clear; output; clear;';
ODS LISTING;
ODS GRAPHICS;
ODS HTML;
DATA tableA;
INPUT Team $ 1-21 Point PassYds RushYds;

IF Team = 'Miami Dolphins' or Team = 'New England Patriots' or Team = 'New
York Jets' or Team = 'Buffalo Bills' or Team = 'Pittsburgh Steelers'
or Team = 'Baltimore Ravens' or Team = 'Cincinnati Bengals' or Team =
'Cleveland Browns' or Team = 'Tennessee Titans' or Team = 'Indianapolis
Colts'
or Team = 'Houston Texans' or Team = 'Jacksonville Jaguars' or Team = 'Los
Angeles Chargers' or Team = 'Denver Broncos'
or Team = 'Kansas City Chiefs' or Team ='Oakland Raiders' THEN
conference='AFC';

IF Team = 'Arizona Cardinals' or Team = 'Atlanta Falcons' or Team = 'Carolina
Panthers' or Team = 'Chicago Bears' or Team = 'Dallas Cowboys'
or Team = 'Detroit Lions' or Team = 'Green Bay Packers' or Team = 'Los
Angeles Rams' or Team = 'Minnesota Vikings' or Team = 'New Orleans Saints'
or Team = 'New York Giants' or Team = 'Philadelphia Eagles' or Team = 'San
Francisco 49ers' or Team = 'Seattle Seahawks '
or Team = 'Tampa Bay Buccaneers' or Team ='Washington Redskins' THEN
conference='NFC';
Year='2017';
DATALINES;
Arizona Cardinals      295 3640 1386
Atlanta Falcons        353 3990 1847
Baltimore Ravens       395 3030 1856
Buffalo Bills          302 2825 2017
Carolina Panthers      363 3077 2102
Chicago Bears          264 2811 1788
Cincinnati Bengals     290 3122 1366
Cleveland Browns       234 3228 1714
Dallas Cowboys         354 3141 2170
Denver Broncos         289 3333 1852
Detroit Lions          410 4183 1221
Green Bay Packers      320 3167 1724
Houston Texans         338 3278 1842
Indianapolis Colts     263 2892 1661
Jacksonville Jaguars   417 3593 2262
Kansas City Chiefs     415 4104 1903
Los Angeles Chargers   355 4431 1595
Los Angeles Rams       478 3831 1953
Miami Dolphins         281 3535 1388
Minnesota Vikings      382 3753 1957
New England Patriots   458 4418 1889
New Orleans Saints     448 4189 2070
New York Giants        246 3479 1549
New York Jets          298 3182 1702
Oakland Raiders        301 3631 1554
Philadelphia Eagles    457 3737 2115
```

```
Pittsburgh Steelers   406 4380 1667
San Francisco 49ers   331 3925 1662
Seattle Seahawks      366 3657 1629
Tampa Bay Buccaneers  335 4366 1448
Tennessee Titans      334 3191 1833
Washington Redskins   342 3751 1448
;
DATA tableB;
INPUT Team $ 1-21 Point PassYds RushYds;

IF Team = 'Miami Dolphins' or Team = 'New England Patriots' or Team = 'New
York Jets' or Team = 'Buffalo Bills' or Team = 'Pittsburgh Steelers'
or Team = 'Baltimore Ravens' or Team = 'Cincinnati Bengals' or Team =
'Cleveland Browns' or Team = 'Tennessee Titans' or Team = 'Indianapolis
Colts'
or Team = 'Houston Texans' or Team = 'Jacksonville Jaguars' or Team = 'Los
Angeles Chargers' or Team = 'Denver Broncos'
or Team = 'Kansas City Chiefs' or Team ='Oakland Raiders' THEN
conference='AFC';

IF Team = 'Arizona Cardinals' or Team = 'Atlanta Falcons' or Team = 'Carolina
Panthers' or Team = 'Chicago Bears' or Team = 'Dallas Cowboys'
or Team = 'Detroit Lions' or Team = 'Green Bay Packers' or Team = 'Los
Angeles Rams' or Team = 'Minnesota Vikings' or Team = 'New Orleans Saints'
or Team = 'New York Giants' or Team = 'Philadelphia Eagles' or Team = 'San
Francisco 49ers' or Team = 'Seattle Seahawks '
or Team = 'Tampa Bay Buccaneers' or Team ='Washington Redskins' THEN
conference='NFC';

Year='2018';
DATALINES;
Arizona Cardinals    225 2523 1342
Atlanta Falcons      414 4653 1573
Baltimore Ravens     389 3558 2441
Buffalo Bills        269 2794 1984
Carolina Panthers    376 3836 2136
Chicago Bears        421 3564 1938
Cincinnati Bengals   368 3290 1682
Cleveland Browns     359 4007 1893
Dallas Cowboys       359 3538 1963
Denver Broncos       329 3695 1907
Detroit Lions        324 3576 1660
Green Bay Packers    376 4238 1667
Houston Texans       402 3781 2021
Indianapolis Colts   433 4461 1718
Jacksonville Jaguars 245 3109 1723
Kansas City Chiefs   565 4955 1855
Los Angeles Chargers 428 4089 1873
Los Angeles Rams     527 4507 2231
Miami Dolphins       319 2900 1738
Minnesota Vikings    360 4036 1493
New England Patriots 436 4258 2037
New Orleans Saints   504 4042 2025
New York Giants      369 4047 1650
New York Jets        333 3165 1622
Oakland Raiders      290 3751 1628
Philadelphia Eagles  367 4275 1570
```

```
Pittsburgh Steelers  428 5008 1445
San Francisco 49ers  342 3867 1902
Seattle Seahawks     428 3093 2560
Tampa Bay Buccaneers 396 5125 1523
Tennessee Titans     310 2975 2027
Washington Redskins  281 3021 1774
;
DATA combined;
SET tableA tableB;
RUN;
QUIT;

PROC SORT DATA=combined;BY conference;
PROC GCHART DATA=combined;BY conference;
WHERE Year='2017';
HBAR RushYds;
TITLE 'Asitha,Assignment#01 and problem#01 part_a';
RUN;
QUIT;

PROC GCHART DATA=combined;
VBAR PassYds / MIDPOINTS= 2700 3050 3400 3750 4100 4450 4800 5150;
TITLE 'Asitha,Assignment#01 and problem#01 part_b';
RUN;
QUIT;

PROC GCHART DATA=combined;
VBAR conference / GROUP = Year DISCRETE TYPE=MEAN SUMVAR=Point;
TITLE 'Asitha,Assignment#01 and problem#01 part_c';
RUN;
QUIT;

PROC TTEST DATA=combined ALPHA=0.06 CI=EQUAL PLOTS(ONLY)=(HISTOGRAM BOXPLOT
QQ);
CLASS Year;
VAR PassYds;
TITLE 'Asitha,Assignment#02 and problem#02 part_a';
RUN;
QUIT;


PROC SORT DATA=new_table;BY Year conference;
PROC TTEST DATA=new_table ALPHA=0.02 CI=EQUAL;BY Year conference;
PAIRED PassYds*RushYds;
TITLE 'Asitha,Assignment#02 and problem#02 part_b';
RUN;
ODS HTML CLOSE;
QUIT;
```

Assignment -5

```
dm 'log; clear; output; clear;';
ODS LISTING;
ODS GRAPHICS;
ODS HTML;

DATA one;
INPUT Type $ Time @@;
DATALINES;
Type_1 9  Type_1 12 Type_1 10 Type_1 8 Type_1 15
Type_2 20 Type_2 21 Type_2 23 Type_2 17 Type_2 30
Type_3 6  Type_3 5 Type_3 8 Type_3 16 Type_3 7
;

PROC NPAR1WAY DATA =one WILCOXON PLOTS =WILCOXONBOXPLOT;
CLASS Type;
VAR Time;
TITLE 'Asitha,Assignment#05 and problem#01 part_a';

PROC GLM DATA=one PLOTS = (RESIDUALS DIAGNOSTICS);
CLASS Type;
MODEL Time=Type;
MEANS Type;
TITLE 'Asitha,Assignment#05 and problem#01 part_b';

data temp2018;
input Month $ Day    MAXTEMP    MINTEMP    AVGTEMP    DEWPTTEMP    AVGHUMID;
datalines;
 Sep       1        95         73         83.3         69.4          65
 Sep       2        92         73         81.8         70.4          70
 Sep       3        85         73         76.9         71.1          83
 Sep       4        82         72         75.3         72.6          92
 Sep       5        83         72         75.6         73.1          92
 Sep       6        85         71         76.4         71.9          87
 Sep       7        78         71         73.5         71.7          94
 Sep       8        75         65         69.6         66.1          89
 Sep       9        78         62         68.2         60.6          78
 Sep      10        76         59         66.1         60.2          82
 Sep      11        83         59         70.2         62.7          80
 Sep      12        82         64         72.7         67.0          83
 Sep      13        83         71         75.9         69.9          82
 Sep      14        90         69         77.8         69.1          77
 Sep      15        86         67         75.6         70.3          85
 Sep      16        90         68         77.6         69.5          79
 Sep      17        92         68         80.0         70.6          75
 Sep      18        93         72         82.1         70.4          70
 Sep      19        93         72         82.7         68.3          64
 Sep      20        91         72         81.5         68.8          67
 Sep      21        77         58         67.9         63.5          86
 Sep      22        77         56         66.2         58.4          77
 Sep      23        71         63         67.2         62.3          84
 Sep      24        79         67         71.3         67.5          88
 Sep      25        89         65         73.9         64.2          74
 Sep      26        67         47         58.4         49.1          73
 Sep      27        74         42         58.1         47.8          74
```

Sep	28	78	54	66.3	60.4	82
Sep	29	78	60	69.0	64.6	87
Sep	30	84	70	74.1	67.9	81
Oct	1	86	69	75.8	68.4	79
Oct	2	87	67	76.6	68.8	78
Oct	3	89	73	80.2	69.3	71
Oct	4	77	63	69.3	65.1	87
Oct	5	89	63	76.1	66.8	75
Oct	6	77	57	65.6	60.0	82
Oct	7	75	57	64.4	62.6	94
Oct	8	83	66	72.9	68.5	87
Oct	9	70	57	65.2	63.4	94
Oct	10	61	46	52.7	46.0	79
Oct	11	62	43	52.3	42.5	72
Oct	12	63	46	53.9	51.1	90
Oct	13	53	45	50.0	48.1	93
Oct	14	58	36	48.8	47.6	96
Oct	15	51	35	41.0	32.6	74
Oct	16	60	36	46.1	37.2	75
Oct	17	71	37	53.4	44.3	77
Oct	18	67	47	56.5	48.6	78
Oct	19	62	49	55.3	53.4	94
Oct	20	72	43	55.3	45.4	76
Oct	21	71	37	53.7	41.9	70
Oct	22	72	46	57.9	46.3	67
Oct	23	72	47	57.1	48.6	77
Oct	24	59	44	52.5	49.7	91
Oct	25	53	49	50.6	49.6	96
Oct	26	69	43	52.3	47.9	87
Oct	27	79	43	58.6	48.2	74
Oct	28	73	44	59.2	45.0	65
Oct	29	83	41	62.0	50.8	71
Oct	30	73	52	64.5	55.7	73
Oct	31	56	51	54.3	40.8	61
Nov	1	61	45	51.0	40.7	70
Nov	2	62	40	50.4	37.0	63
Nov	3	67	43	54.9	42.5	64
Nov	4	58	41	48.7	37.8	68
Nov	5	70	41	56.4	42.7	63
Nov	6	68	37	51.2	37.9	65
Nov	7	61	43	50.1	35.4	59
Nov	8	48	37	42.3	36.3	81
Nov	9	50	25	37.8	28.0	70
Nov	10	51	19	35.4	19.8	56
Nov	11	48	42	44.7	30.2	57
Nov	12	42	24	31.3	27.9	88
Nov	13	33	16	23.7	17.9	79
Nov	14	42	14	26.8	18.3	74
Nov	15	70	23	44.0	28.4	60
Nov	16	68	28	47.8	34.5	66
Nov	17	61	34	45.9	35.5	69
Nov	18	35	27	30.6	27.7	89
Nov	19	54	25	37.9	29.2	73
Nov	20	56	24	38.4	28.9	72
Nov	21	62	25	43.3	29.7	64
Nov	22	66	33	49.6	33.9	58
Nov	23	69	41	56.1	39.4	55

```
 Nov      24        74          30         53.6         31.3          48
 Nov      25        60          28         40.5         28.3          62
 Nov      26        45          23         31.7         23.5          73
 Nov      27        48          22         34.3         25.2          72
 Nov      28        62          29         42.0         30.7          68
 Nov      29        60          29         42.9         35.8          79
 Nov      30        60          33         48.5         45.7          91
 Dec       1        61          41         51.0         38.9          65
 Dec       2        51          33         41.5         30.6          66
 Dec       3        34          28         30.8         24.1          76
 Dec       4        34          25         29.7         22.0          73
 Dec       5        56          21         37.7         23.4          63
 Dec       6        48          35         41.9         30.6          64
 Dec       7        35          30         32.8         24.3          71
 Dec       8        38          29         33.4         26.2          75
 Dec       9        46          20         31.9         21.9          69
 Dec      10        51          19         31.8         21.5          71
 Dec      11        63          20         42.8         28.8          62
 Dec      12        61          26         45.5         37.8          76
 Dec      13        53          39         44.5         42.2          92
 Dec      14        53          34         41.2         31.2          70
 Dec      15        57          25         37.4         20.6          57
 Dec      16        59          28         40.0         28.3          67
 Dec      17        56          26         38.3         29.4          75
 Dec      18        55          30         44.1         38.7          82
 Dec      19        55          40         47.4         44.2          89
 Dec      20        56          40         46.5         28.6          51
 Dec      21        57          27         41.9         26.1          57
 Dec      22        57          28         43.4         30.1          61
 Dec      23        51          32         41.2         30.9          69
 Dec      24        55          31         41.9         30.8          67
 Dec      25        55          25         41.8         36.1          82
 Dec      26        58          52         55.7         54.2          95
 Dec      27        54          29         42.8         36.7          79
 Dec      28        34          25         29.2         20.8          71
 Dec      29        31          23         27.0         18.3          70
 Dec      30        40          21         32.0         24.7          76
 Dec      31        47          28         37.9         34.5          88
;

PROC RANK DATA=temp2018 OUT=New_1 TIES=HIGH;

VAR DEWPTTEMP MAXTEMP;

RANKS R_DEWPTTEMP R_MAXTEMP;* R_DEWPTTEMP IS REPRESENTS THE RANK OF THE
DEWPTTEMP AND  R_MAXTEMP REPRESENTS THE RANK OF MAXTEMP;

PROC SORT DATA=New_1;BY DEWPTTEMP;
PROC PRINT DATA=New_1(obs= 15) NOOBS;
VAR Month DEWPTTEMP R_DEWPTTEMP;
TITLE 'Asitha,Assignment#05 and problem#02';
PROC SORT DATA=New_1;BY MAXTEMP;
PROC PRINT DATA=New_1(obs= 15) NOOBS;
VAR Month MAXTEMP R_MAXTEMP;
TITLE 'Asitha,Assignment#05 and problem#02';

RUN;
```

```
ODS HTML CLOSE;
ODS GRAPHICS OFF;
QUIT;
```

Assignment -7

```
dm 'log; clear; output; clear;';
ODS GRAPHICS;
ODS HTML;
ODS LISTING;

data temp2018;
input Month $ Day    MAXTEMP    MINTEMP    AVGTEMP    DEWPTTEMP    AVGHUMID;
datalines;
 Sep       1        95         73         83.3        69.4         65
 Sep       2        92         73         81.8        70.4         70
 Sep       3        85         73         76.9        71.1         83
 Sep       4        82         72         75.3        72.6         92
 Sep       5        83         72         75.6        73.1         92
 Sep       6        85         71         76.4        71.9         87
 Sep       7        78         71         73.5        71.7         94
 Sep       8        75         65         69.6        66.1         89
 Sep       9        78         62         68.2        60.6         78
 Sep      10        76         59         66.1        60.2         82
 Sep      11        83         59         70.2        62.7         80
 Sep      12        82         64         72.7        67.0         83
 Sep      13        83         71         75.9        69.9         82
 Sep      14        90         69         77.8        69.1         77
 Sep      15        86         67         75.6        70.3         85
 Sep      16        90         68         77.6        69.5         79
 Sep      17        92         68         80.0        70.6         75
 Sep      18        93         72         82.1        70.4         70
 Sep      19        93         72         82.7        68.3         64
 Sep      20        91         72         81.5        68.8         67
 Sep      21        77         58         67.9        63.5         86
 Sep      22        77         56         66.2        58.4         77
 Sep      23        71         63         67.2        62.3         84
 Sep      24        79         67         71.3        67.5         88
 Sep      25        89         65         73.9        64.2         74
 Sep      26        67         47         58.4        49.1         73
 Sep      27        74         42         58.1        47.8         74
 Sep      28        78         54         66.3        60.4         82
 Sep      29        78         60         69.0        64.6         87
 Sep      30        84         70         74.1        67.9         81
 Oct       1        86         69         75.8        68.4         79
 Oct       2        87         67         76.6        68.8         78
 Oct       3        89         73         80.2        69.3         71
 Oct       4        77         63         69.3        65.1         87
 Oct       5        89         63         76.1        66.8         75
 Oct       6        77         57         65.6        60.0         82
 Oct       7        75         57         64.4        62.6         94
 Oct       8        83         66         72.9        68.5         87
 Oct       9        70         57         65.2        63.4         94
 Oct      10        61         46         52.7        46.0         79
 Oct      11        62         43         52.3        42.5         72
 Oct      12        63         46         53.9        51.1         90
 Oct      13        53         45         50.0        48.1         93
 Oct      14        58         36         48.8        47.6         96
 Oct      15        51         35         41.0        32.6         74
```

Oct	16	60	36	46.1	37.2	75
Oct	17	71	37	53.4	44.3	77
Oct	18	67	47	56.5	48.6	78
Oct	19	62	49	55.3	53.4	94
Oct	20	72	43	55.3	45.4	76
Oct	21	71	37	53.7	41.9	70
Oct	22	72	46	57.9	46.3	67
Oct	23	72	47	57.1	48.6	77
Oct	24	59	44	52.5	49.7	91
Oct	25	53	49	50.6	49.6	96
Oct	26	69	43	52.3	47.9	87
Oct	27	79	43	58.6	48.2	74
Oct	28	73	44	59.2	45.0	65
Oct	29	83	41	62.0	50.8	71
Oct	30	73	52	64.5	55.7	73
Oct	31	56	51	54.3	40.8	61
Nov	1	61	45	51.0	40.7	70
Nov	2	62	40	50.4	37.0	63
Nov	3	67	43	54.9	42.5	64
Nov	4	58	41	48.7	37.8	68
Nov	5	70	41	56.4	42.7	63
Nov	6	68	37	51.2	37.9	65
Nov	7	61	43	50.1	35.4	59
Nov	8	48	37	42.3	36.3	81
Nov	9	50	25	37.8	28.0	70
Nov	10	51	19	35.4	19.8	56
Nov	11	48	42	44.7	30.2	57
Nov	12	42	24	31.3	27.9	88
Nov	13	33	16	23.7	17.9	79
Nov	14	42	14	26.8	18.3	74
Nov	15	70	23	44.0	28.4	60
Nov	16	68	28	47.8	34.5	66
Nov	17	61	34	45.9	35.5	69
Nov	18	35	27	30.6	27.7	89
Nov	19	54	25	37.9	29.2	73
Nov	20	56	24	38.4	28.9	72
Nov	21	62	25	43.3	29.7	64
Nov	22	66	33	49.6	33.9	58
Nov	23	69	41	56.1	39.4	55
Nov	24	74	30	53.6	31.3	48
Nov	25	60	28	40.5	28.3	62
Nov	26	45	23	31.7	23.5	73
Nov	27	48	22	34.3	25.2	72
Nov	28	62	29	42.0	30.7	68
Nov	29	60	29	42.9	35.8	79
Nov	30	60	33	48.5	45.7	91
Dec	1	61	41	51.0	38.9	65
Dec	2	51	33	41.5	30.6	66
Dec	3	34	28	30.8	24.1	76
Dec	4	34	25	29.7	22.0	73
Dec	5	56	21	37.7	23.4	63
Dec	6	48	35	41.9	30.6	64
Dec	7	35	30	32.8	24.3	71
Dec	8	38	29	33.4	26.2	75
Dec	9	46	20	31.9	21.9	69
Dec	10	51	19	31.8	21.5	71
Dec	11	63	20	42.8	28.8	62

```
 Dec       12        61          26          45.5          37.8          76
 Dec       13        53          39          44.5          42.2          92
 Dec       14        53          34          41.2          31.2          70
 Dec       15        57          25          37.4          20.6          57
 Dec       16        59          28          40.0          28.3          67
 Dec       17        56          26          38.3          29.4          75
 Dec       18        55          30          44.1          38.7          82
 Dec       19        55          40          47.4          44.2          89
 Dec       20        56          40          46.5          28.6          51
 Dec       21        57          27          41.9          26.1          57
 Dec       22        57          28          43.4          30.1          61
 Dec       23        51          32          41.2          30.9          69
 Dec       24        55          31          41.9          30.8          67
 Dec       25        55          25          41.8          36.1          82
 Dec       26        58          52          55.7          54.2          95
 Dec       27        54          29          42.8          36.7          79
 Dec       28        34          25          29.2          20.8          71
 Dec       29        31          23          27.0          18.3          70
 Dec       30        40          21          32.0          24.7          76
 Dec       31        47          28          37.9          34.5          88
;


PROC REPORT DATA=temp2018 NOWD;
COLUMN Month MAXTEMP DEWPTTEMP;
DEFINE Month  / GROUP 'Month';
DEFINE MAXTEMP /'Mean Maximum Temperature' MEAN;
DEFINE DEWPTTEMP /'Mean Dew Point Temperature' MEAN;
TITLE 'Asitha,Assignment#07 and problem#01';
TITLE2 'Mean maximum temperature and mean dew point temperature for each
month';


PROC REPORT DATA=temp2018 NOWD;
COLUMN Month DEWPTTEMP;
DEFINE Month  / GROUP 'Month';
DEFINE DEWPTTEMP /'Minimum Dew Point Temperature' MIN;
TITLE 'Asitha,Assignment#07 and problem#02';
TITLE3 'Minimum dew point temperature for each month ';

* Asitha,Assignment#07 and problem#03;
DATA C1;*Create new data set and nemed as C1;
SET temp2018;
DOY=243+_N_;*Create a new variable for day of the year and named as DOY ;

PROC SORT DATA=C1;BY DECENDING AVGTEMP;
```

Assignment -8

```
DM 'LOG;CLEAR;ODSRESULTS;CLEAR;';
ODS GRAPHICS;
ODS LISTING;
ODS HTML;
DATA temp2018;
INPUT Month $ Day    MAXTEMP    MINTEMP    AVGTEMP    DEWPTTEMP    AVGHUMID;
DATALINES;
 Sep       1        95         73         83.3       69.4         65
 Sep       2        92         73         81.8       70.4         70
 Sep       3        85         73         76.9       71.1         83
 Sep       4        82         72         75.3       72.6         92
 Sep       5        83         72         75.6       73.1         92
 Sep       6        85         71         76.4       71.9         87
 Sep       7        78         71         73.5       71.7         94
 Sep       8        75         65         69.6       66.1         89
 Sep       9        78         62         68.2       60.6         78
 Sep      10        76         59         66.1       60.2         82
 Sep      11        83         59         70.2       62.7         80
 Sep      12        82         64         72.7       67.0         83
 Sep      13        83         71         75.9       69.9         82
 Sep      14        90         69         77.8       69.1         77
 Sep      15        86         67         75.6       70.3         85
 Sep      16        90         68         77.6       69.5         79
 Sep      17        92         68         80.0       70.6         75
 Sep      18        93         72         82.1       70.4         70
 Sep      19        93         72         82.7       68.3         64
 Sep      20        91         72         81.5       68.8         67
 Sep      21        77         58         67.9       63.5         86
 Sep      22        77         56         66.2       58.4         77
 Sep      23        71         63         67.2       62.3         84
 Sep      24        79         67         71.3       67.5         88
 Sep      25        89         65         73.9       64.2         74
 Sep      26        67         47         58.4       49.1         73
 Sep      27        74         42         58.1       47.8         74
 Sep      28        78         54         66.3       60.4         82
 Sep      29        78         60         69.0       64.6         87
 Sep      30        84         70         74.1       67.9         81
 Oct       1        86         69         75.8       68.4         79
 Oct       2        87         67         76.6       68.8         78
 Oct       3        89         73         80.2       69.3         71
 Oct       4        77         63         69.3       65.1         87
 Oct       5        89         63         76.1       66.8         75
 Oct       6        77         57         65.6       60.0         82
 Oct       7        75         57         64.4       62.6         94
 Oct       8        83         66         72.9       68.5         87
 Oct       9        70         57         65.2       63.4         94
 Oct      10        61         46         52.7       46.0         79
 Oct      11        62         43         52.3       42.5         72
 Oct      12        63         46         53.9       51.1         90
 Oct      13        53         45         50.0       48.1         93
 Oct      14        58         36         48.8       47.6         96
 Oct      15        51         35         41.0       32.6         74
 Oct      16        60         36         46.1       37.2         75
```

Oct	17	71	37	53.4	44.3	77
Oct	18	67	47	56.5	48.6	78
Oct	19	62	49	55.3	53.4	94
Oct	20	72	43	55.3	45.4	76
Oct	21	71	37	53.7	41.9	70
Oct	22	72	46	57.9	46.3	67
Oct	23	72	47	57.1	48.6	77
Oct	24	59	44	52.5	49.7	91
Oct	25	53	49	50.6	49.6	96
Oct	26	69	43	52.3	47.9	87
Oct	27	79	43	58.6	48.2	74
Oct	28	73	44	59.2	45.0	65
Oct	29	83	41	62.0	50.8	71
Oct	30	73	52	64.5	55.7	73
Oct	31	56	51	54.3	40.8	61
Nov	1	61	45	51.0	40.7	70
Nov	2	62	40	50.4	37.0	63
Nov	3	67	43	54.9	42.5	64
Nov	4	58	41	48.7	37.8	68
Nov	5	70	41	56.4	42.7	63
Nov	6	68	37	51.2	37.9	65
Nov	7	61	43	50.1	35.4	59
Nov	8	48	37	42.3	36.3	81
Nov	9	50	25	37.8	28.0	70
Nov	10	51	19	35.4	19.8	56
Nov	11	48	42	44.7	30.2	57
Nov	12	42	24	31.3	27.9	88
Nov	13	33	16	23.7	17.9	79
Nov	14	42	14	26.8	18.3	74
Nov	15	70	23	44.0	28.4	60
Nov	16	68	28	47.8	34.5	66
Nov	17	61	34	45.9	35.5	69
Nov	18	35	27	30.6	27.7	89
Nov	19	54	25	37.9	29.2	73
Nov	20	56	24	38.4	28.9	72
Nov	21	62	25	43.3	29.7	64
Nov	22	66	33	49.6	33.9	58
Nov	23	69	41	56.1	39.4	55
Nov	24	74	30	53.6	31.3	48
Nov	25	60	28	40.5	28.3	62
Nov	26	45	23	31.7	23.5	73
Nov	27	48	22	34.3	25.2	72
Nov	28	62	29	42.0	30.7	68
Nov	29	60	29	42.9	35.8	79
Nov	30	60	33	48.5	45.7	91
Dec	1	61	41	51.0	38.9	65
Dec	2	51	33	41.5	30.6	66
Dec	3	34	28	30.8	24.1	76
Dec	4	34	25	29.7	22.0	73
Dec	5	56	21	37.7	23.4	63
Dec	6	48	35	41.9	30.6	64
Dec	7	35	30	32.8	24.3	71
Dec	8	38	29	33.4	26.2	75
Dec	9	46	20	31.9	21.9	69
Dec	10	51	19	31.8	21.5	71
Dec	11	63	20	42.8	28.8	62
Dec	12	61	26	45.5	37.8	76

```
 Dec      13       53       39       44.5       42.2       92
 Dec      14       53       34       41.2       31.2       70
 Dec      15       57       25       37.4       20.6       57
 Dec      16       59       28       40.0       28.3       67
 Dec      17       56       26       38.3       29.4       75
 Dec      18       55       30       44.1       38.7       82
 Dec      19       55       40       47.4       44.2       89
 Dec      20       56       40       46.5       28.6       51
 Dec      21       57       27       41.9       26.1       57
 Dec      22       57       28       43.4       30.1       61
 Dec      23       51       32       41.2       30.9       69
 Dec      24       55       31       41.9       30.8       67
 Dec      25       55       25       41.8       36.1       82
 Dec      26       58       52       55.7       54.2       95
 Dec      27       54       29       42.8       36.7       79
 Dec      28       34       25       29.2       20.8       71
 Dec      29       31       23       27.0       18.3       70
 Dec      30       40       21       32.0       24.7       76
 Dec      31       47       28       37.9       34.5       88
;
PROC SORT DATA=temp2018;BY Month;
PROC CORR DATA=temp2018 PLOTS = SCATTER;
BY Month;
WHERE Month='Sep' or Month='Dec';
VAR MINTEMP AVGTEMP;
WITH DEWPTTEMP;
TITLE 'Asitha,Assignment#08 and problem#01 part_a';


PROC SORT DATA=temp2018;BY Month;
PROC PLOT DATA=temp2018 HPERCENT =75;
BY Month;
WHERE Month='Sep' or Month='Dec';
PLOT DEWPTTEMP*MINTEMP='S' DEWPTTEMP*AVGTEMP='D';
TITLE 'Asitha,Assignment#08 and problem#01 part_b';

PROC PLOT DATA=temp2018;
WHERE Month='Oct';
PLOT DEWPTTEMP*AVGTEMP='a' DEWPTTEMP*MAXTEMP='m' /OVERLAY;
TITLE 'Asitha,Assignment#08 and problem#01 part_c';

RUN;
QUIT;
*Problem no 2;
DATA tableA;
INPUT Team $ 1-21 Point PassYds RushYds;

IF Team = 'Miami Dolphins' or Team = 'New England Patriots' or Team = 'New
York Jets' or Team = 'Buffalo Bills' or Team = 'Pittsburgh Steelers'
or Team = 'Baltimore Ravens' or Team = 'Cincinnati Bengals' or Team =
'Cleveland Browns' or Team = 'Tennessee Titans' or Team = 'Indianapolis
Colts'
or Team = 'Houston Texans' or Team = 'Jacksonville Jaguars' or Team = 'Los
Angeles Chargers' or Team = 'Denver Broncos'
or Team = 'Kansas City Chiefs' or Team ='Oakland Raiders' THEN
conference='AFC';
```

```
IF Team = 'Arizona Cardinals' or Team = 'Atlanta Falcons' or Team = 'Carolina
Panthers' or Team = 'Chicago Bears' or Team = 'Dallas Cowboys'
or Team = 'Detroit Lions' or Team = 'Green Bay Packers' or Team = 'Los
Angeles Rams' or Team = 'Minnesota Vikings' or Team = 'New Orleans Saints'
or Team = 'New York Giants' or Team = 'Philadelphia Eagles' or Team = 'San
Francisco 49ers' or Team = 'Seattle Seahawks '
or Team = 'Tampa Bay Buccaneers' or Team ='Washington Redskins' or Team
='Team two part e' or Team ='Team two part f' THEN conference='NFC';
Year='2017';
DATALINES;
Arizona Cardinals     295 3640 1386
Atlanta Falcons       353 3990 1847
Baltimore Ravens      395 3030 1856
Buffalo Bills         302 2825 2017
Carolina Panthers     363 3077 2102
Chicago Bears         264 2811 1788
Cincinnati Bengals    290 3122 1366
Cleveland Browns      234 3228 1714
Dallas Cowboys        354 3141 2170
Denver Broncos        289 3333 1852
Detroit Lions         410 4183 1221
Green Bay Packers     320 3167 1724
Houston Texans        338 3278 1842
Indianapolis Colts    263 2892 1661
Jacksonville Jaguars  417 3593 2262
Kansas City Chiefs    415 4104 1903
Los Angeles Chargers  355 4431 1595
Los Angeles Rams      478 3831 1953
Miami Dolphins        281 3535 1388
Minnesota Vikings     382 3753 1957
New England Patriots  458 4418 1889
New Orleans Saints    448 4189 2070
New York Giants       246 3479 1549
New York Jets         298 3182 1702
Oakland Raiders       301 3631 1554
Philadelphia Eagles   457 3737 2115
Pittsburgh Steelers   406 4380 1667
San Francisco 49ers   331 3925 1662
Seattle Seahawks      366 3657 1629
Tampa Bay Buccaneers  335 4366 1448
Tennessee Titans      334 3191 1833
Washington Redskins   342 3751 1448
Team two part e       .   .    2000
Team two part f       .   .    1800
;
DATA tableB;
INPUT Team $ 1-21 Point PassYds RushYds;

IF Team = 'Miami Dolphins' or Team = 'New England Patriots' or Team = 'New
York Jets' or Team = 'Buffalo Bills' or Team = 'Pittsburgh Steelers'
or Team = 'Baltimore Ravens' or Team = 'Cincinnati Bengals' or Team =
'Cleveland Browns' or Team = 'Tennessee Titans' or Team = 'Indianapolis
Colts'
or Team = 'Houston Texans' or Team = 'Jacksonville Jaguars' or Team = 'Los
Angeles Chargers' or Team = 'Denver Broncos'
or Team = 'Kansas City Chiefs' or Team ='Oakland Raiders' THEN
conference='AFC';
```

```
IF Team = 'Arizona Cardinals' or Team = 'Atlanta Falcons' or Team = 'Carolina
Panthers' or Team = 'Chicago Bears' or Team = 'Dallas Cowboys'
or Team = 'Detroit Lions' or Team = 'Green Bay Packers' or Team = 'Los
Angeles Rams' or Team = 'Minnesota Vikings' or Team = 'New Orleans Saints'
or Team = 'New York Giants' or Team = 'Philadelphia Eagles' or Team = 'San
Francisco 49ers' or Team = 'Seattle Seahawks '
or Team = 'Tampa Bay Buccaneers' or Team ='Washington Redskins' THEN
conference='NFC';

Year='2018';
DATALINES;
Arizona Cardinals    225 2523 1342
Atlanta Falcons      414 4653 1573
Baltimore Ravens     389 3558 2441
Buffalo Bills        269 2794 1984
Carolina Panthers    376 3836 2136
Chicago Bears        421 3564 1938
Cincinnati Bengals   368 3290 1682
Cleveland Browns     359 4007 1893
Dallas Cowboys       359 3538 1963
Denver Broncos       329 3695 1907
Detroit Lions        324 3576 1660
Green Bay Packers    376 4238 1667
Houston Texans       402 3781 2021
Indianapolis Colts   433 4461 1718
Jacksonville Jaguars 245 3109 1723
Kansas City Chiefs   565 4955 1855
Los Angeles Chargers 428 4089 1873
Los Angeles Rams     527 4507 2231
Miami Dolphins       319 2900 1738
Minnesota Vikings    360 4036 1493
New England Patriots 436 4258 2037
New Orleans Saints   504 4042 2025
New York Giants      369 4047 1650
New York Jets        333 3165 1622
Oakland Raiders      290 3751 1628
Philadelphia Eagles  367 4275 1570
Pittsburgh Steelers  428 5008 1445
San Francisco 49ers  342 3867 1902
Seattle Seahawks     428 3093 2560
Tampa Bay Buccaneers 396 5125 1523
Tennessee Titans     310 2975 2027
Washington Redskins  281 3021 1774
;
DATA combined;
SET tableA tableB;

PROC REG DATA=combined SIMPLE;
WHERE Year='2017' and conference ='NFC' ;
MODEL Point = RushYds/P CLM CLI CLB ALPHA =0.01;
ID RushYds;
PLOT Point*RushYds;
TITLE 'Asitha,Assignment#08 and problem#02 part_a';

RUN;
ODS HTML CLOSE;QUIT;
```

Assignment -9

```
dm 'log; clear; output; clear;';
ODS LISTING;
ODS GRAPHICS;
ODS HTML;


LIBNAME SASCLASS 'C:\Users\akaruna\Desktop\MESONET2018';

DATA SASCLASS.MESONET2018;

INPUT Month $ Day    MAXTEMP    MINTEMP    AVGTEMP    DEWPTTEMP    AVGHUMID;
DATALINES;
 Sep        1         95         73         83.3         69.4          65
 Sep        2         92         73         81.8         70.4          70
 Sep        3         85         73         76.9         71.1          83
 Sep        4         82         72         75.3         72.6          92
 Sep        5         83         72         75.6         73.1          92
 Sep        6         85         71         76.4         71.9          87
 Sep        7         78         71         73.5         71.7          94
 Sep        8         75         65         69.6         66.1          89
 Sep        9         78         62         68.2         60.6          78
 Sep       10         76         59         66.1         60.2          82
 Sep       11         83         59         70.2         62.7          80
 Sep       12         82         64         72.7         67.0          83
 Sep       13         83         71         75.9         69.9          82
 Sep       14         90         69         77.8         69.1          77
 Sep       15         86         67         75.6         70.3          85
 Sep       16         90         68         77.6         69.5          79
 Sep       17         92         68         80.0         70.6          75
 Sep       18         93         72         82.1         70.4          70
 Sep       19         93         72         82.7         68.3          64
 Sep       20         91         72         81.5         68.8          67
 Sep       21         77         58         67.9         63.5          86
 Sep       22         77         56         66.2         58.4          77
 Sep       23         71         63         67.2         62.3          84
 Sep       24         79         67         71.3         67.5          88
 Sep       25         89         65         73.9         64.2          74
 Sep       26         67         47         58.4         49.1          73
 Sep       27         74         42         58.1         47.8          74
 Sep       28         78         54         66.3         60.4          82
 Sep       29         78         60         69.0         64.6          87
 Sep       30         84         70         74.1         67.9          81
 Oct        1         86         69         75.8         68.4          79
 Oct        2         87         67         76.6         68.8          78
 Oct        3         89         73         80.2         69.3          71
 Oct        4         77         63         69.3         65.1          87
 Oct        5         89         63         76.1         66.8          75
 Oct        6         77         57         65.6         60.0          82
 Oct        7         75         57         64.4         62.6          94
 Oct        8         83         66         72.9         68.5          87
 Oct        9         70         57         65.2         63.4          94
 Oct       10         61         46         52.7         46.0          79
 Oct       11         62         43         52.3         42.5          72
```

Oct	12	63	46	53.9	51.1	90
Oct	13	53	45	50.0	48.1	93
Oct	14	58	36	48.8	47.6	96
Oct	15	51	35	41.0	32.6	74
Oct	16	60	36	46.1	37.2	75
Oct	17	71	37	53.4	44.3	77
Oct	18	67	47	56.5	48.6	78
Oct	19	62	49	55.3	53.4	94
Oct	20	72	43	55.3	45.4	76
Oct	21	71	37	53.7	41.9	70
Oct	22	72	46	57.9	46.3	67
Oct	23	72	47	57.1	48.6	77
Oct	24	59	44	52.5	49.7	91
Oct	25	53	49	50.6	49.6	96
Oct	26	69	43	52.3	47.9	87
Oct	27	79	43	58.6	48.2	74
Oct	28	73	44	59.2	45.0	65
Oct	29	83	41	62.0	50.8	71
Oct	30	73	52	64.5	55.7	73
Oct	31	56	51	54.3	40.8	61
Nov	1	61	45	51.0	40.7	70
Nov	2	62	40	50.4	37.0	63
Nov	3	67	43	54.9	42.5	64
Nov	4	58	41	48.7	37.8	68
Nov	5	70	41	56.4	42.7	63
Nov	6	68	37	51.2	37.9	65
Nov	7	61	43	50.1	35.4	59
Nov	8	48	37	42.3	36.3	81
Nov	9	50	25	37.8	28.0	70
Nov	10	51	19	35.4	19.8	56
Nov	11	48	42	44.7	30.2	57
Nov	12	42	24	31.3	27.9	88
Nov	13	33	16	23.7	17.9	79
Nov	14	42	14	26.8	18.3	74
Nov	15	70	23	44.0	28.4	60
Nov	16	68	28	47.8	34.5	66
Nov	17	61	34	45.9	35.5	69
Nov	18	35	27	30.6	27.7	89
Nov	19	54	25	37.9	29.2	73
Nov	20	56	24	38.4	28.9	72
Nov	21	62	25	43.3	29.7	64
Nov	22	66	33	49.6	33.9	58
Nov	23	69	41	56.1	39.4	55
Nov	24	74	30	53.6	31.3	48
Nov	25	60	28	40.5	28.3	62
Nov	26	45	23	31.7	23.5	73
Nov	27	48	22	34.3	25.2	72
Nov	28	62	29	42.0	30.7	68
Nov	29	60	29	42.9	35.8	79
Nov	30	60	33	48.5	45.7	91
Dec	1	61	41	51.0	38.9	65
Dec	2	51	33	41.5	30.6	66
Dec	3	34	28	30.8	24.1	76
Dec	4	34	25	29.7	22.0	73
Dec	5	56	21	37.7	23.4	63
Dec	6	48	35	41.9	30.6	64
Dec	7	35	30	32.8	24.3	71

```
 Dec        8        38          29          33.4          26.2          75
 Dec        9        46          20          31.9          21.9          69
 Dec       10        51          19          31.8          21.5          71
 Dec       11        63          20          42.8          28.8          62
 Dec       12        61          26          45.5          37.8          76
 Dec       13        53          39          44.5          42.2          92
 Dec       14        53          34          41.2          31.2          70
 Dec       15        57          25          37.4          20.6          57
 Dec       16        59          28          40.0          28.3          67
 Dec       17        56          26          38.3          29.4          75
 Dec       18        55          30          44.1          38.7          82
 Dec       19        55          40          47.4          44.2          89
 Dec       20        56          40          46.5          28.6          51
 Dec       21        57          27          41.9          26.1          57
 Dec       22        57          28          43.4          30.1          61
 Dec       23        51          32          41.2          30.9          69
 Dec       24        55          31          41.9          30.8          67
 Dec       25        55          25          41.8          36.1          82
 Dec       26        58          52          55.7          54.2          95
 Dec       27        54          29          42.8          36.7          79
 Dec       28        34          25          29.2          20.8          71
 Dec       29        31          23          27.0          18.3          70
 Dec       30        40          21          32.0          24.7          76
 Dec       31        47          28          37.9          34.5          88
;

PROC SORT DATA =SASCLASS.MESONET2018;BY Month;
PROC MEANS DATA =SASCLASS.MESONET2018 ALPHA = 0.06 MEAN STDERR CLM;
BY Month;

VAR MAXTEMP    MINTEMP    AVGTEMP    DEWPTTEMP    AVGHUMID;
OUTPUT OUT = WORK.MESOSUMMARY18 MEAN =MAXTEMP_MEAN    MINTEMP_MEAN
AVGTEMP_MEAN    DEWPTTEMP_MEAN    AVGHUMID_MEAN
                                  STDERR=MAXTEMP_STDER    MINTEMP_STDER
AVGTEMP_STDER    DEWPTTEMP_STDER    AVGHUMID_STDER
                                  UCLM =MAXTEMP_UCLM    MINTEMP_UCLM
AVGTEMP_UCLM    DEWPTTEMP_UCLM    AVGHUMID_UCLM
                                  LCLM =MAXTEMP_LCLM    MINTEMP_LCLM
AVGTEMP_LCLM    DEWPTTEMP_LCLM    AVGHUMID_LCLM;
PROC PRINT DATA=WORK.MESOSUMMARY18;
TITLE 'Asitha,Assignment#09 and problem#01 part_b';

DATA SASCLASS.SEPOCT2018;
SET SASCLASS.MESONET2018;
WHERE Month = 'Sep' or Month='Oct';
TITLE 'Asitha,Assignment#09 and problem#02 part_a_to_c';

*-------------------------------------------------------------------------------
-------------------------------------------------;

*Question_2;
DATA one;
a=PROBBNML(.01,25,2);*PART_a;
b=PROBF(0.90,535,76);*PART_b;
c_1=1-PROBT(-2.088,9);*PART_c_1;
c_2=1-PROBT(-2.088,13);*PART_c_2;
```

```
PROC PRINT DATA=one;
TITLE 'Asitha,Assignment#09 and problem#01 part_a_to_c';

RUN;
ODS HTML CLOSE;
ODS LISTING CLOSE;
QUIT;
```

Assignment -10

```
dm 'log; clear; output; clear;';
ODS GRAPHICS;
ODS HTML;
ODS LISTING;

FILENAME A 'C:\Users\akaruna\Desktop\SUBWAY1.TXT';
DATA one;
INFILE A;
INPUT us cs ct ss st rcs rct isi ota cts cstsc str ft etp etc pps ppt am nus;
LABEL us='usage of subway' cs='cleanliness of stations' ct='cleanliness of
trains' ss='safty in stations' st='safty on trains' rcs='rush hour crowding
in stations'

      rct='rush hour crowding in trains' isi='in station information' ota='on
train annousment' cts='Convenience of train stops' cstsc='Convenience of
train schedule'

      str='Speed of travel' ft='Frequency of trains' etp='Ease of token
purchase' etc='Ease of token collection' pps='Police presence in stations'
ppt='Police presence on trains'

      am='Availability of maps' nus='Number of uses per week';

*IF cs<=2 THEN cs_new='satisfactory';
*IF cs=3  THEN cs_new='neutral';
*IF cs>=4 THEN cs_new='unsatisfactory';
*IF ct<=2 THEN ct_new='satisfactory';
*IF ct=3  THEN ct_new='neutral';
*IF ct>=4 THEN ct_new='unsatisfactory';

*LABEL cs_new='newvarible_1'  ct_new='newvarible_2' ;
data two;
set one;
array old{17} cs ct ss st rcs rct isi ota cts cstsc str ft etp etc pps ppt am
;

array new{17} cs_new ct_new ss_new st_new rcs_new rct_new isi_new ota_new
cts_new cstsc_new str_new ft_new etp_new etc_new pps_new ppt_new am_new ;

do i=1 to 17 ;


if old{i}= 1 or old{i}= 2 then  new{i}=1 ;

if old{i}= 3 then  new{i}=2;

if old{i}= 4 or old{i}= 5 then  new{i}=3;


end;

LABEL cs_new='new cleanliness of stations' ct_new='new cleanliness of trains'
ss_new='safty in stations' st_new='new safty on trains'
```

```
      rcs_new='new rush hour crowding in stations' rct_new='new rush hour
crowding in trains' isi_new='new in station information'

      ota_new='new on train annousment' cts_new='new Convenience of train
stops' cstsc_new='new Convenience of train schedule'

      str_new='new Speed of travel' ft_new='new Frequency of trains'
etp_new='new Ease of token purchase' etc_new='new Ease of token collection'
      pps_new='new Police presence in stations' ppt_new='new Police presence
on trains' am_new='new Availability of maps';



proc freq data=two ;
tables isi isi_new isi*isi_new /plots=none NOCUM NOPERCENT ;
title 'Asitha,Assignment#11 and problem#01';
*-------------------------------------------------------------------------
-------------------------------------------------------------------------;
data four;
seed1=2120;
do i=1 to 40;

   x1=6*rannor(seed1)+148;

 output;
end;


proc gchart data=four;
vbar  x1 /midpoints = 130 134 138 142 146 150 154 158;
title 'Asitha,Assignment#11 and problem#02 part_a';

data five;
seed2=2120;
do i=1 TO 20;
   do j=1 to 40;

   x2=6*rannor(seed2)+148;

   output;
   end;
end;

proc sort data=five;by i;
proc means data=five mean std n;
by i;
var x2;
title 'Asitha,Assignment#11 and problem#02 part_b';
RUN;
ODS HTML CLOSE;
ODS LISTING CLOSE;
QUIT;
```

Assignment -11

```
DM 'LOG; CLEAR;OUTPUT;CLEAR; ODSRESULTS; CLEAR;';
TITLE;FOOTNOTE;
ODS GRAPHICS ON;
ODS HTML ;



*-------------------------------------------------------------------------------;
* Question 1 part a;
*-------------------------------------------------------------------------------;

ODS PDF FILE='C:\Users\akaruna\Desktop\GRAD
PROJECT\ASITHAK2\mudiyanselageODS1.pdf';


DATA one;
INPUT group $ response @@;
DATALINES;

GROUP1 75 GROUP1 89 GROUP1 94 GROUP1 86 GROUP1 88
GROUP2 84 GROUP2 78 GROUP2 83 GROUP2 91 GROUP2 94
GROUP3 101 GROUP3 92 GROUP3 82 GROUP3 79 GROUP3 95
GROUP4 93 GROUP4 98 GROUP4 100 GROUP4 87 GROUP4 78
GROUP5 71 GROUP5 76 GROUP5 81 GROUP5 82 GROUP5 86
;

PROC UNIVARIATE DATA=one Mu0=75;
CLASS group;
VAR response;
ODS HTML SELECT MOMENTS TESTSFORLOCATION ;
ODS PDF SELECT MOMENTS TESTSFORLOCATION ;

TITLE 'Asitha,Grad_Project and problem#01 part_a';


*-------------------------------------------------------------------------------;
* Question 1 part b;
*-------------------------------------------------------------------------------;


PROC GCHART DATA=one;
VBAR group/DISCRETE TYPE=MEAN SUMVAR=response;
ODS HTML SELECT GCHART;
ODS PDF SELECT GCHART;
TITLE 'Asitha,Grad_Project and problem#01 part_b';

RUN;
ODS PDF CLOSE;


*-------------------------------------------------------------------------------;
* Question 2 part a;
*-------------------------------------------------------------------------------;
```

```
DATA two;
SET Asi.Odshw2a;


PROC SORT DATA=two;BY iteration;
PROC REG DATA=two ALPHA=0.1;
BY iteration;
MODEL Y=X/CLB CLI;
ODS OUTPUT PARAMETERESTIMATES=ak47 ;
ODS HTML SELECT NONE;
ODS LISTING CLOSE;
TITLE 'Asitha,Grad_Project and problem#02 part_a';
RUN;


*-------------------------------------------------------------------------------;
* Question 2 part b;
*-------------------------------------------------------------------------------;
ODS LISTING;
ODS HTML;

DATA Three;
SET WORK.ak47;

Grad_one=((LowerCL < -12.3) AND ( UpperCL<-12.3));

IF LowerCL < -12.3 AND UpperCL<-12.3 THEN Grad_two='1';

ELSE Grad_two='0';

PROC FREQ DATA=Three ;
TABLES Grad_one Grad_two /NOPERCENT NOCOL NOCUM ;
ODS HTML SELECT ONEWAYFREQS;
ODS OUTPUT ONEWAYFREQS=ak48;

TITLE 'Asitha,Grad_Project and problem#02 part_b_I and II';

RUN;

*-------------------------------------------------------------------------------;
* Question 2 part c;
*-------------------------------------------------------------------------------;

ODS HTML FILE='C:\Users\akaruna\Desktop\GRAD
PROJECT\ASITHAK\mudiyanselageCLs.html';

DATA four;
SET WORK.ak47;
WHERE Variable = 'X';


PROC PRINT DATA=four NOOBS;
VAR LowerCL UpperCL;
ODS HTML SELECT PRINT;

TITLE 'Asitha,Grad_Project and problem#02 part_c';
```

```
RUN;
ODS HTML CLOSE;

QUIT;
```