```
GET DATA /TYPE=XLSX
 /FILE='F:\MSc\MSc Final\Project\Logistic Regression.xlsx'
 /SHEET=name 'Sheet1'
  /CELLRANGE=full
  /READNAMES=on
 /ASSUMEDSTRWIDTH=32767.
EXECUTE.
DATASET NAME DataSet1 WINDOW=FRONT.
LOGISTIC REGRESSION VARIABLES TSH
  /METHOD=FSTEP(LR) AgeGroup Gender EatingHabit Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q
 /CONTRAST (AgeGroup)=Indicator
 /CONTRAST (Gender)=Indicator
 /CONTRAST (EatingHabit)=Indicator
  /CONTRAST (Q1)=Indicator
 /CONTRAST (Q2)=Indicator
  /CONTRAST (Q3)=Indicator
 /CONTRAST (Q4)=Indicator
 /CONTRAST (Q5)=Indicator
 /CONTRAST (Q6)=Indicator
 /CONTRAST (Q7)=Indicator
  /CONTRAST (Q8)=Indicator
 /CONTRAST (Q9)=Indicator
 /CONTRAST (Q10)=Indicator
 /CONTRAST (Q11)=Indicator
 /CONTRAST (Q12)=Indicator
  /CONTRAST (Q13)=Indicator
 /CONTRAST (Q14)=Indicator
  /CONTRAST (Q15)=Indicator
 /CONTRAST (Q16)=Indicator
 /CONTRAST (Q29)=Indicator
 /CONTRAST (Q30)=Indicator
 /CONTRAST (Q31)=Indicator
  /CONTRAST (Q32)=Indicator
 /CONTRAST (Q34)=Indicator
 /CONTRAST (Q36)=Indicator
 /CONTRAST (Q38)=Indicator
 /CONTRAST (B12)=Indicator
  /CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).
```

### **Logistic Regression**

### Notes

Output Created		26-MAY-2020 21:44:58	8
Comments			
Input	Active Dataset	DataSet1	
	Filter	<none></none>	
	Weight	<none></none>	
	Split File	<none></none>	
	N of Rows in Working Data File	60	3
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing	

### Notes

Notes	
Syntax	LOGISTIC REGRESSION
	VARIABLES TSH
	/METHOD=FSTEP(LR)
	AgeGroup Gender
	EatingHabit Q1 Q2 Q3 Q4
	Q5 Q6 Q7 Q8 Q9 Q10
	Q11 Q12 Q13 Q14 Q15
	Q16 Q29 Q30 Q31 Q32
	Q34 Q36 Q38 B12
	/CONTRAST (AgeGroup)
	=Indicator
	/CONTRAST (Gender)
	=Indicator
	/CONTRAST
	(EatingHabit)=Indicator
	/CONTRAST (Q1)
	=Indicator
	/CONTRAST (Q2) =Indicator
	/CONTRAST (Q3)
	=Indicator
	/CONTRAST (Q4)
	=Indicator
	/CONTRAST (Q5)
	=Indicator
	/CONTRAST (Q6)
	=Indicator
	/CONTRAST (Q7)
	=Indicator
	/CONTRAST (Q8)
	=Indicator
	/CONTRAST (Q9)
	=Indicator /CONTRAST (Q10)
	=Indicator
	/CONTRAST (Q11)
	=Indicator
	/CONTRAST (Q12)
	=Indicator
	/CONTRAST (Q13)
	=Indicator
	/CONTRAST (Q14)
	=Indicator
	/CONTRAST (Q15)
	=Indicator /CONTRAST (Q16)
	=Indicator
	/CONTRAST (Q29)
	=Indicator
	/CONTRAST (Q30)
	=Indicator
	/CONTRAST (Q31)
	=Indicator
	/CONTRAST (Q32)
	=Indicator
	/CONTRAST (Q34)
	=Indicator
	/CONTRAST (Q36)
	=Indicator /CONTRAST (Q38)
	-Indicator

=Indicator

/CONTRAST (B12)

#### Notes

Resources	Processor Time	00:00:00.08
	Elapsed Time	00:00:00.10

[DataSet1]

### Warnings

Text: EatingHabit Command: LOGISTIC REGRESSION
This procedure cannot use string variables longer than 8 bytes.
The values will be truncated.

### **Case Processing Summary**

Unweighted Cases	N	Percent	
Selected Cases	31	49.2	
	Missing Cases	32	50.8
	63	100.0	
Unselected Cases	0	.0	
Total		63	100.0

a. If weight is in effect, see classification table for the total number of cases.

### **Dependent Variable Encoding**

Original Value	Internal Value
0	0
1	1

## **Categorical Variables Codings**

			Pa	rameter codi	ng
		Frequency	(1)	(2)	(3)
Age Group	11 to 30	3	1.000	.000	.000
	31 to 50	11	.000	1.000	.000
	51 to 70	16	.000	.000	1.000
	71 to 90	1	.000	.000	.000
Eating Habit	Eggetari	1	1.000	.000	
	Non - Ve	7	.000	1.000	
	Vegetari	23	.000	.000	
Q9	0	16	1.000		
	1	15	.000		
Q8	0	19	1.000		
	1	12	.000		
Q7	0	18	1.000		
	1	13	.000		
Q6	0	24	1.000		
	1	7	.000		
Q5	0	18	1.000		
	1	13	.000		
Q4	0	14	1.000		
	1	17	.000		
Q3	0	22	1.000		
	1	9	.000		
Q2	0	24	1.000		
	1	7	.000		
Q1	0	15	1.000		
	1	16	.000		
Gender	Female	22	1.000		
	Male	9	.000		
Q10	0	17	1.000		
	1	14	.000		
B12	0	24	1.000		
	1	7	.000		
Q12	0	24	1.000		
	1	7	.000		
Q38	0	23	1.000		
	1	8	.000		
Q36	0	27	1.000		
	1	4	.000		
Q34	0	10	1.000		
	1	21	.000		
Q32	0	28	1.000		
	1	3	.000		

## **Categorical Variables Codings**

			Pa	Parameter coding	
		Frequency	(1)	(2)	(3)
Q31	0	15	1.000		
	1	16	.000		
Q30	0	20	1.000		
	1	11	.000		
Q29	0	24	1.000		
	1	7	.000		
Q13	0	9	1.000		
	1	22	.000		
Q14	0	7	1.000		
	1	24	.000		
Q15	0	23	1.000		
	1	8	.000		
Q16	0	21	1.000		
	1	10	.000		
Q11	0	14	1.000		
	1	17	.000		

# **Block 0: Beginning Block**

# Classification Table<sup>a,b</sup>

			Predicted			
		TSH		Percentage		
Observed		0	1	Correct		
Step 0	TSH	0	25	0	100.0	
		1	6	0	.0	
Overall Percentage				80.6		

a. Constant is included in the model.

### Variables in the Equation

		В	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-1.427	.455	9.855	1	.002	.240

b. The cut value is .500

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	AgeGroup	1.406	3	.704
		AgeGroup(1)	.797	1	.372
		AgeGroup(2)	.685	1	.408
		AgeGroup(3)	.008	1	.930
		Gender(1)	.552	1	.457
		EatingHabit	.439	2	.803
		EatingHabit(1)	.248	1	.618
		EatingHabit(2)	.149	1	.700
		Q1(1)	2.998	1	.083
		Q2(1)	3.200	1	.074
		Q3(1)	5.114	1	.024
		Q4(1)	.420	1	.517
		Q5(1)	.199	1	.656
		Q6(1)	3.200	1	.074
		Q7(1)	.199	1	.656
		Q8(1)	.400	1	.527
		Q9(1)	.008	1	.930
		Q10(1)	.070	1	.791
		Q11(1)	.070	1	.791
		Q12(1)	.149	1	.700
		Q13(1)	.552	1	.457
		Q14(1)	.149	1	.700
		Q15(1)	.325	1	.569
		Q16(1)	1.072	1	.301
		Q29(1)	.492	1	.483
		Q30(1)	3.160	1	.075
		Q31(1)	.008	1	.930
		Q32(1)	.797	1	.372
		Q34(1)	.828	1	.363
		Q36(1)	1.102	1	.294
		Q38(1)	.325	1	.569
		B12(1)	.492	1	.483
	Overall Sta	tistics	31.000	30	.415

**Block 1: Method = Forward Stepwise (Likelihood Ratio)** 

### **Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	4.693	1	.030
	Block	4.693	1	.030
	Model	4.693	1	.030

### **Model Summary**

Step	-2 Log	Cox & Snell R	Nagelkerke R
	likelihood	Square	Square
1	25.769 <sup>a</sup>	.140	.225

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

## Classification Table<sup>a</sup>

			Predicted			
			TS	SH	Percentage	
Observed			0	1	Correct	
Step 1	TSH	0	25	0	100.0	
		1	6	0	.0	
	Overall	Percentage			80.6	

a. The cut value is .500

### Variables in the Equation

		В	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	Q3(1)	-2.079	1.000	4.324	1	.038	.125
	Constant	223	.671	.111	1	.739	.800

a. Variable(s) entered on step 1: Q3.

#### **Model if Term Removed**

Variable	Model Log Likelihood	Change in -2 Log Likelihood	df	Sig. of the Change
Step 1 Q3	-15.231	4.693	1	.030

Variables not in the Equation

			Score	df	Sig.
Step 1	Variables	AgeGroup	1.212	3	.750
		AgeGroup(1)	1.061	1	.303
		AgeGroup(2)	.059	1	.808
		AgeGroup(3)	.252	1	.616
		Gender(1)	.354	1	.552
		EatingHabit	.295	2	.863
		EatingHabit(1)	.105	1	.746
		EatingHabit(2)	.168	1	.682
		Q1(1)	.335	1	.563
		Q2(1)	.508	1	.476
		Q4(1)	.117	1	.732
		Q5(1)	.165	1	.684
		Q6(1)	2.221	1	.136
		Q7(1)	.003	1	.959
		Q8(1)	.253	1	.615
		Q9(1)	.252	1	.616
		Q10(1)	.469	1	.494
		Q11(1)	.098	1	.754
		Q12(1)	.000	1	.989
		Q13(1)	.046	1	.830
		Q14(1)	.335	1	.563
		Q15(1)	.763	1	.382
		Q16(1)	.120	1	.729
		Q29(1)	.234	1	.629
		Q30(1)	2.667	1	.102
		Q31(1)	.351	1	.554
		Q32(1)	1.061	1	.303
		Q34(1)	1.926	1	.165
		Q36(1)	2.145	1	.143
		Q38(1)	.253	1	.615
		B12(1)	1.759	1	.185
	Overall Sta	tistics	31.000	29	.365