

SAS Data set for Q1: WORK.Survey_pizza_1'

Q1. Based on the observations and data type of each column in the SAS data set, please use the 'PROC FORMAT' to write the following rules to display the corresponding variables listed aside.

age_group:

```
1 = "18 to 24 years old"
2 = "25 to 44 years old"
3 = "45 to 64 years old"
4 = "65 years old and over"
. = "Missing"
```

downtown_area:

```
0 = "Rural area"
1 = "Urban"
2 = "Suburb"
. = "Missing"
```

likefood1 = "Excellent"

```
2 = "Very good"
3 = "Good"
4 = "Fair"
5 = "Poor"
. = "Missing"
```

Howorder

```
'01' = "on site"
'02' = "delivery"
'.' = "Missing"
```

ser_satisfaction:

```
1 = "Strongly agree"
2 = "Agree"
3 = "Disagree"
4 = "Strongly disagree"
. = "Missing"
```

service_quality 1 = "Excellent"

```
2 = "Very good"
3 = "Good"
4 = "Fair"
5 = "Poor"
. = "Missing"
```

highest_education1 = "No schooling"

```
2 = "Completed elementary"
3 = "Completed secondary"
4 = "Completed college"
5 = "Completed university"
6 = "Other education or training"
7 = "Others"
. = "Missing"
```

```

job_type1 = "Employed full-time"
2 = "Employed part-time"
3 = "Unemployed and looking for work"
4 = "Unemployed and looking for work"
. = "Missing"

yearly_income 10 = "$50,000 or more but less than $60,000"
11 = "$60,000 or more but less than $70,000"
12 = "$70,000 or more but less than $80,000"
13 = "$80,000 or more but less than $90,000"
14 = "$90,000 or more but less than $100,000"
15 = "$100,000 or more but less than $150,000"
16 = "$150,000 and over"
. = "Missing"

```

SAS Data set for Q2 to Q3: WORK.Stock_price

Checking the SAS data set 'Stock_price' in WORK library. Noticing the fields 'price_open', 'price_close', 'price_high' and 'price_low' are all of character types. Find solution for the following questions:

Q2. Create new columns 'open', 'close', 'high' and 'low' that contains the numeric values of the existing columns 'price_open', 'price_close', 'price_high' and 'price_low'.

Q3. Create a user defined format 'price_bucket' using 'PROC FORMAT', and apply this format on the column 'open' created in Q13. After the format is applied, the column 'open' is displayed based on the following rule:

- If open is between 0 and 19.99 then it is displayed as '0_20'
- If open is between 20 and 49.99 then it is displayed as '20_50'
- If open is between 50 and 99.99 then it is displayed as '50_100'
- If open is more than 99.99 then then it is displayed as '100plus'

Additionally, apply put function and format above to create a new character column 'open_bucket' which contains actual string values i.e. '0_20', '20_50'...