

## TWO DIMENSIONAL ARRAY APPLICATIONS: DATA ANALYSIS

### Case One: Questionnaire Analysis

A potential political candidate wants to know the age break down of his supporters. He commissions a poll which asks the following questions.

(1) Who will you vote for in the coming election?

1. Sam Smoothe
2. Gabby Gruff
3. No Opinion

(2) What age group are you in ?

1. Under 30
2. Over 30

The candidate wants the results displayed in the following form

|             | Under 30 | 30 or over | Total |
|-------------|----------|------------|-------|
| Sam Smoothe | 10       | 20         | 30    |
| Gabby Gruff | 16       | 22         | 38    |
| No Opinion  | 5        | 1          | 6     |
|             |          |            | 74    |

### Case 2: Census Analysis

A census is conducted to analyse, among other things, the age sex breakdown of the community. The questions asked had the following format.

- |    |              |           |
|----|--------------|-----------|
| 1. | Less than 10 | 1. Male   |
| 2. | 10-15        | 2. Female |
| 3. | 16-21        |           |
| 4. | 22-30        |           |
| 5. | 31-40        |           |
| 6. | 41-50        |           |
| 7. | 51-65        |           |
| 8. | Over 65      |           |

The data read in should be of the format age, sex

1,2

2,1

etc .....

Output should have the following form:

| Age   | Male | Female | Total |
|-------|------|--------|-------|
| <10   | 1    | 2      | 3     |
| .     | .    | .      | .     |
| .     | .    | .      | .     |
| >65   | 3    | 3      | 6     |
| Total | 20   | 21     | 41    |