**A. Arrays**

1. How to store the marks of fifty students in a C program? Fifty Variables?

2. How to declare an array in a C program?

**int marks[5];**

a) the name of the array: marks

b) the size of the array: 5

c) the data type of each array element: int

d) array data type (compiler): int [ ]

e) array index/position numbers: 0, 1, 2, 3, 4 (=5-1)

marks

0 1 2 3 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 99 | 88 | 77 | 66 | 55 |

data[0] = 99, data[1] = 88, data[2] = 77, data[3] = 66, data[4] = 55

f) array subscript/index: **data[j], j:0, 1, 2, 3, 4**

**B. Parallel Arrays**

1. How to process a table of data?

|  |  |  |  |
| --- | --- | --- | --- |
| item name | pencil | pen | eraser |
| price | $ 0.5 | $ 1.5 | $ 0.75 |
| quantity | 2 | 3 | 4 |
| total amount of purchase | $ 1.00 | $ 4.50 | $ 3.00 |

2. use of three parallel arrays

0 1 2 array index

|  |  |  |
| --- | --- | --- |
| 0.5 | 1.5 | 0.75 |

|  |  |  |
| --- | --- | --- |
| 2 | 3 | 4 |

|  |  |  |
| --- | --- | --- |
| 1.00 | 4.50 | 3.00 |