

## 8. *The Data Division*

Each item of data that your program is going to use must be described and named - thus setting aside data storage space in Central Memory; this is done in one of the sections of the Data Division (e.g. the Working-Storage Section).

Each item of data should be given:

1. a *level* number (dealt with in lesson 9);
2. a *name*;
3. a *picture* (this is a description of the item's length and type).

### *Numeric Data* (0 - 9)

	level	data-name	picture
e.g.(1)	01	STUDENT-MARK	PIC 9.

sets aside space in central-memory for a single digit number called 'STUDENT-MARK'.

e.g.(2)        01     STUDENT-TOTAL-MARK   PIC 999.  
sets aside space for a three-digit number.

### *Alphabetic data* ('A' - 'Z' plus space)

e.g.(1)	01	STUDENT-GRADE	PIC A.
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sets aside space for a single alphabetic character.

e.g.(2)        01     STUDENT-GROUP-CODE   PIC AAAA.  
sets aside space for a 4-character alphabetic code.

### *Alphanumeric data* (any character)

e.g.	01	ACCOUNTS-CODE	PIC XXXXX
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sets aside space for a 5-character alphanumeric code.

Note that in the PIC (picture) for a data-item:

9 means that the data will be numeric;

A means that it will be alphabetic;

X means that it will be alphanumeric.

The number of 9's, A's or X's shows how much space has been set aside to hold the data. Alternatively, the length of the field may be placed in brackets after the type:

e.g.            01 STUDENT-NAME PIC A(20)  
allows a name of up to 20 letters.

### *Exercise* (Use level 01 for each data description)

Write data definitions for the following data items needed in a payroll program (make up data-names): employee's name, department name, employee-number (a 7-digit numeric field), annual salary (nearest pound), date-of-birth.