Chapter 2

I/O AND REPORTING

Get on the Fast Track!

SYS-ED/
COMPUTER
EDUCATION
TECHNIQUES, INC.
Objectives

You will learn:

C Simple report generation.
C Creating a file description.
C Specifying dataset characteristics.
C Formatting a report with titles and footings.
### 1 Record Description

```
datename length [start]  
   [CH | NU | PD | BI]  
   [printdigits[.decimals]]  
   [ROUND]  
   [(column-heading)]  
   [RIGHT|LEFT]  
   [VALUE literal [REINIT]]
```

<table>
<thead>
<tr>
<th>Option/Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>length</td>
<td>Length in bytes of the input field.</td>
</tr>
<tr>
<td>start</td>
<td>Starting position.</td>
</tr>
<tr>
<td><strong>Data Type</strong></td>
<td>Input data type. Note the default.</td>
</tr>
<tr>
<td>printdigits</td>
<td>Number of digits to print and the number of digits to the right of the decimal point.</td>
</tr>
<tr>
<td><strong>ROUND</strong></td>
<td>Round the number before printing.</td>
</tr>
<tr>
<td><strong>Column Heading</strong></td>
<td>Default column heading. This can be changed in the LIST command.</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>Right or left justify. By default numbers are justified right and characters are justified left.</td>
</tr>
<tr>
<td><strong>Initial Value</strong></td>
<td>The initial value of the field. Optionally, the field can be reset at the beginning of each cycle by specifying the REINIT clause. The cycle is started when an ACCEPT, REJECT or exit from procedure logic. Example:</td>
</tr>
</tbody>
</table>

```
CNTR  3  PD  VALUE 0 REINIT
FLAG  1  CH  VALUE 'Y'
```
<table>
<thead>
<tr>
<th>Option/Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>REDEFINE Clause</td>
<td>The REDEFINE clause is used to create a field using the same memory location as another field. The field can have different characteristics including the length.</td>
</tr>
<tr>
<td></td>
<td><strong>Example:</strong></td>
</tr>
<tr>
<td></td>
<td>DATE 6</td>
</tr>
<tr>
<td></td>
<td>REDEFINE DATE</td>
</tr>
<tr>
<td></td>
<td>MONTH 2</td>
</tr>
<tr>
<td></td>
<td>DAY 2</td>
</tr>
<tr>
<td></td>
<td>YEAR 2</td>
</tr>
</tbody>
</table>
2 LIST Statement

```
LIST [SUPPRESS,PRIOR,SUM] {dataname,literal,tally}
  AT [n, dataname + n]
  [column-title]
  [WITH {EJECT,n} BEFORE]
  [AND {EJECT,n} AFTER]
```

The LIST command is used to tell DYL-280:

- which fields are to be displayed.
- what the column title should be.
- which field(s) should be accumulated.
- column position on the report line.
- carriage control information.

The important rules and guidelines for the LIST statement are:

- The SUPPRESS option only prints the first occurrence of a field.
- The SUM option is used to accumulate a numeric field.
- PRIOR print the previous value of a field.
- Literals can also be printed.
- The AT specifies the column position of the field on the report line.
- TALLY counts the number of records printed.
- Fixed print and automatic positioning cannot be mixed on one LIST command.
- SUM and PRIOR can only be used in an ON CHANGE or ON FINAL paragraph.
- NEWPAGE command can be used for ejecting to a new page; NEWt does not have any operands.
Examples:

LIST DIV DEPT EXPENSES

LIST SUPPRESS DIV DEPT EXPENSES

LIST SUPPRESS (DIV DEPT) NAME EXPENSES

LIST SUM EXPENSES WITH 2 AFTER

LIST PRIOR DEPT SUM EXPENSES

LIST ACCOUNT AT 1 ACCTCODE AT 12 BALANCE AT 50

LIST 'GRAND TOTAL==' AT 30 SUM BALANCE AT 50

LIST DIV DEPT EXPENSES WITH 1 BEFORE AND 2 AFTER
3 Fixed Print Position Reporting

Definition:

This form of reporting can be used to format your own report.

Format:

LIST [SUM | PRIOR] dataname AT nnn
LIST LITERAL AT nnn

Example:

LIST ACCOUNT AT 1
    TRANS AT 38
    ACCTCODE AT 20
    BALANCE AT 50

LIST `GRAND TOTAL' AT 25
Tailored client-specific program.
4 Report Statement

The REPORT command is optional and need only be provided if the user wishes to override the report writer defaults and/or wishes to exit from report logic to a user-written external subroutine.

The format of the REPORT statement is:

\[
\text{REPORT [n WIDE] [n LONG] [n BETWEEN] [(module | ASA)] [PLU\text{nnn}]}\\
\]

The command is used to override the system default for the reports.

The default is 132 WIDE 55 LONG and 5 BETWEEN.

Example:

\[
\text{REPORT 80 WIDE}\n\]
5 Title Statement

Tn 'literal title'

[FOOTING]

[FIXED]

[WITH m AFTER] [+p]

The Title statement will cause the following to occur:

C The title/footing is printed on each page.

C A maximum of 9 title and footing lines can be specified.

C The command determines the context and the position of the title or footing. By default, it is centered on the line.
6 Title and Footing Statements

The title or footing statement defines both the contents and placement of the title or footing lines on your report. A maximum of nine title and footing lines may be specified per report.

If specified in the DYL-280 program, these title or footing lines will be printed automatically on each page of the report.

The format of the title/footing statement is:

```
Tn `title contents' [FIXED] [FOOTING] [WITH n AFTER]
```
Tailored client-specific program.
Tailored client-specific program.
Tailored client-specific program.
Tailored client-specific program.
Tailored client-specific program.
Tailored client-specific program.
7 Option Command

```
OPTION mode
```

The OPTION command assigns the programming mode for the job. The programming selected is based on the user requirements.

The OPTION command can also be used to change the programming mode.

<table>
<thead>
<tr>
<th>Programming MODE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONVENTIONAL</td>
<td>Standard DYL-280 - Default.</td>
</tr>
<tr>
<td>STRUCTURED</td>
<td>Allows the use of all the structured facilities available to DYL-280.</td>
</tr>
<tr>
<td>USERDEFAULT</td>
<td>DYL-280 assumes some defaults. This makes it easier for the end user.</td>
</tr>
</tbody>
</table>