Level 2 Create software components using COBOL (7266/7267-203)

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Assignment guide for Candidates
Assignment D

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Introduction – Information for Candidates

About this document

This assignment comprises part of the assessment for Level 2 Create software components using COBOL (7266/7267-203).

Health and safety

You are asked to consider the importance of safe working practices at all times.

You are responsible for maintaining the safety of others as well as your own. Anyone behaving in an unsafe fashion will be stopped and a suitable warning given. You will **not** be allowed to continue with an assignment if you compromise any of the Health and Safety requirements. This may seem rather strict but, apart from the potentially unpleasant consequences, you must acquire the habits required for the workplace.

Time allowance

The recommended time allowance for this assignment is **4 hours**.

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Candidate instructions

Time allowance: 4 hours

Assignment set up:

This assignment is made up of **two** tasks

- Task A - Create and test software to read a file and produce a report
- Task B - Check presentation criteria

Scenario

You work as a software developer for Technic Systems who develop software for clients. You have been asked to create software for a company that requires a printout from an existing file. The software is to read data from a sequential file of employee details and produce salary totals for each department.

The table below shows the fields in the employee file.

Name	Type	Length
Employee number	Numeric	4
Employee name	Alphanumeric	20
Department number	Numeric	2
Salary	Numeric	8 including 2 after the decimal point

Some example data for the employee file which you must create is shown below:

```
0001John Wilkinson      0102500050
0002James Watson        0101577500
0003Fiona Miles         0101675075
0004Richard Thatcher    0202987550
0005Peter Holland       0201755075
0007Michael Wilson      0302999975
0008Amy White           0301675599
0009Everton Hadlow      0303589550
```

The employee records must be created in ascending order of the Department number. The fields in the file are fixed length. There is only one record for each employee but there can be one or more employees in a department.

The data for the file can be created using a text editor. Each record should be terminated by pressing the ENTER key.

Task A

In this task you will read the sequential input file, produce a report and test the software.

1 Design a layout for an employee report which must show the employee records. The report must contain the following:

- a heading at the top of each page which includes the department number and a page number
- each detail line should show the employee number, employee name, and salary
- each department must be on a new page
- if details for a department overflow one page then a new heading for that department must be printed on the new page
- the total value of all salaries for a department should be printed at the end of each department's employee records
- the grand total of all salaries for all departments should be printed at the end of the report

2 Write the code to read the employee file and produce the employee report.

3 Prepare test data and expected results. Test the program, check the expected results against the actual results and resolve any logical or run-time errors.

4 Provide evidence that the program complies with the specification by producing employee reports and file prints.

5 Print a listing of the code.

Task B

In this task you should follow the criteria below when producing your work.

1 The program conforms to the design specification.

2 The program uses the most appropriate data type(s).

3 Meaningful names are used when declaring variables.

4 The program syntax is consistently indented to aid readability.

5 The program is commented.

Notes

- Candidates should produce the following for their assessor:
    - printed program listing
    - employee report layout
    - test data and expected results
    - evidence that the program works correctly.
- At the conclusion of this assignment, hand all paperwork and removable storage media to the test supervisor.
- Ensure that your name is on the removable storage media and all documentation.
- If the assignment is taken over more than one period, all removable storage media and paperwork must be returned to the test supervisor at the end of each sitting.

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