Level 2 Create automated procedures for ICT operating systems (7540-234)

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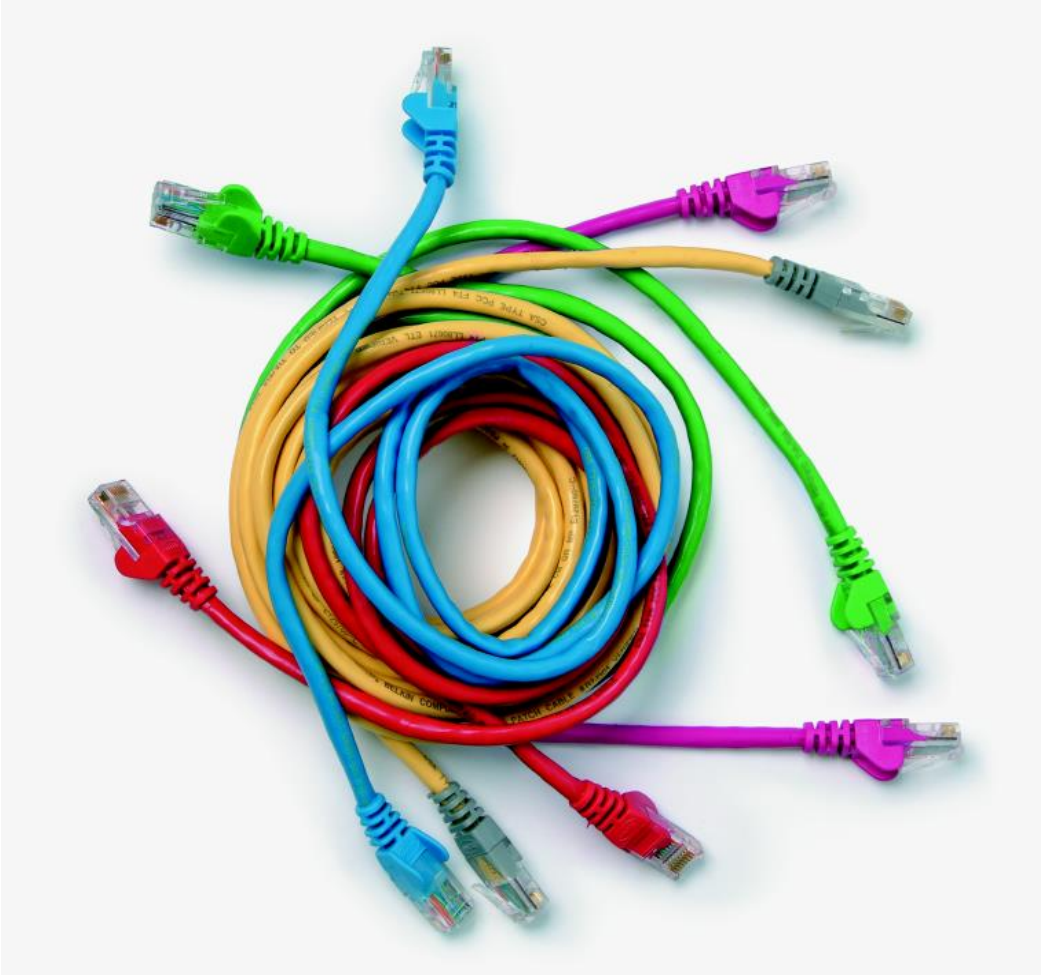
Systems and Principles
Assignment guide for Candidates
Assignment B



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Level 2 Create automated procedures for ICT operating systems (7540-234) Assignment B

Introduction – Information for Candidates

About this document

This assignment comprises all of the assessment for Level 2 Create automated procedures for ICT operating systems (7540-234).

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 **2 hours**.

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Candidate Instructions

Time allowance: 2 hours

Assignment set up:

This assignment is made up of **three** tasks:

- Task A – Explore different strategies for spooling printed output
- Task B – Explore methods of allocation of space for disk storage
- Task C – Work with command languages

Scenario

System Software Experts specialise in developing software used by operating systems. They have been hired to provide solutions for a client's problems. As a contracted employee of System Software Experts your manager has assigned you the task of providing solutions.

Task A – Explore different strategies for spooling printed output

System Software Experts have been contracted to write software for controlling the spooling of printed output on a multi-programming multi-user system with one printer. Two strategies are being considered.

Strategy 1 – Priority

This strategy allows a priority rating to be assigned to files for printing. Files are given a priority rating from 1 to 3 with rating 1 being given top priority. A new file is printed immediately after all previous files with equal or higher priority have been printed.

Strategy 2 – Size

This strategy allows files to be printed according to size. The smallest file is printed first. A new file is printed after all previous files with equal or smaller sizes have been printed.

Table 1 below shows the table of files to be printed at a given moment in time:

Position	Filename	Priority Rating	Size in bytes
1	FL001	3	10555
2	FL002	2	8564
3	FL003	3	25674
4	FL004	1	35698
5	FL005	2	6945
6	FL006	1	12486

Table 1

Files are entered into the table in the order in which they arrive.

(Please complete Tasks A1, A2 and A3 using the Answer Sheet provided.)

1 For **each** of the above strategies produce a list showing the order in which the files will be printed.

2 Another file is added: FL007, with a priority rating of 1 and a size of 22392 bytes.
File FL002 is no longer required and is deleted.

For **each** of the above strategies produce a revised list showing the new order in which the files will be printed.

3 Some printed output is taking a long time to produce because it is at the end of the list whichever strategy is used.

Suggest **one** solution which could increase the speed of output.

Task B – Explore methods of allocation of space for disk storage

A client has contacted your manager because access to his hard disk is getting slower and slower. Your manager has asked you to investigate the problem as the client is suggesting it is your company's software which is at fault.

Table 2 below shows the allocation of files on the client's hard disk drive.

File1	File3	File6	File2	File6		File2		File3	
	File5	File1		File1			File2		File5
	File4		File1	File2			File6		
File7	File2		File4		File2			File6	File2
		File4		File5		File2		File3	
	File3			File1			File6		File5

Table 2

(Please complete Tasks B1 and B2 using the Answer Sheet provided.)

1 Suggest **one** reason why the accesses to the hard disk drive are getting slower.

2 Suggest **one** solution that will increase the speed of access to the hard disk drive.

Task C – Work with command languages

Your manager has asked you to write some file housekeeping tasks using a command language. The code should be fully commented and include the procedure name and author name.

1 Using a command language, create **two** directories called TEST and COPY.

2 Use a text editor to create a text file called FILE1.TXT. This file should include the following text:
This text is in the file called FILE1 created by *candidate name*.

3 Save FILE1.TXT in the directory TEST.

4 Use a text editor to create a text file called FILE2.TXT. This file should include the following text:
This text is in the file called FILE2 created by *candidate name*.

5 Save FILE2.TXT in the directory TEST.

6 Using a command language:

a create a procedure that performs as follows:
- copies all the files in the directory TEST to the directory COPY and displays a directory listing of the TEST and COPY directories if successful
- displays an error message "An error has occurred in A" on the screen if unsuccessful

b name the procedure A
c save the procedure in the TEST directory
d test procedure A for both successful and unsuccessful completion

Evidence can be provided by redirection of output or a Screen Print.

e print a listing of the commented procedure A.

7 Using a command language:

a create a procedure that performs as follows:
- renames all files with an extension of .TXT in the directory COPY with an extension of .BAK, then displays a directory listing of the directory COPY on the screen if successful
- displays an error message "An error has occurred in B" on the screen if unsuccessful

b name the procedure B
c save the procedure in the directory TEST
d test procedure B for both successful and unsuccessful completion

Evidence can be provided by redirection of output or a Screen Print.

e print a listing of the commented procedure.

8 Using a command language:

a create a procedure that performs as follows:
- displays a directory listing of all the files in the directory TEST,
- displays an error message "An error has occurred in C" on the screen if unsuccessful

b name the procedure C
c save the procedure in the directory TEST
d test procedure C for both successful and unsuccessful completion

Evidence can be provided by redirection of output or a Screen Print.

e print a listing of the commented procedure.

9 Using a command language:

a create a procedure that performs as follows:
- deletes all the files in the directory COPY then displays a directory listing of all the files in the directory COPY on the screen if successful
- displays an error message "An error has occurred in D" on the screen if unsuccessful

b name the procedure D

c save the procedure in the directory TEST

d test procedure D for both successful and unsuccessful completion

Evidence can be provided by redirection of output or a Screen Print.

e print a listing of the commented procedure.

10 Using a command language:

a Create and run a procedure that performs as follows:
- returns to the system command line

b name the procedure E

c save the procedure in the directory TEST

d print a listing of the commented procedure.

11 Using a command language:

a create and run a procedure that performs as follows:
- displays a menu as follows

MENU

A Copy files from TEST to COPY
B Rename .txt files in COPY
C Directory listing of TEST
D Delete files in COPY
E Exit

Enter an option:

- runs the procedures A, B, C, D and E.

Evidence can be provided by redirection of output or a Screen Print

b name the procedure MENU

c save the procedure in the directory TEST

d print a listing of the commented procedure.

When you have finished working:

- Sign each document above your name and label all removable storage media with your name.
- Hand all paperwork and removable storage media to your assessor.

If the assignment is taken over more than one period, all paperwork and removable media must be returned to the test supervisor at the end of each sitting.

End of assignment

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