Level 3 Software testing (7540-043)

Systems and Principles
Assignment guide for Candidates
Assignment B

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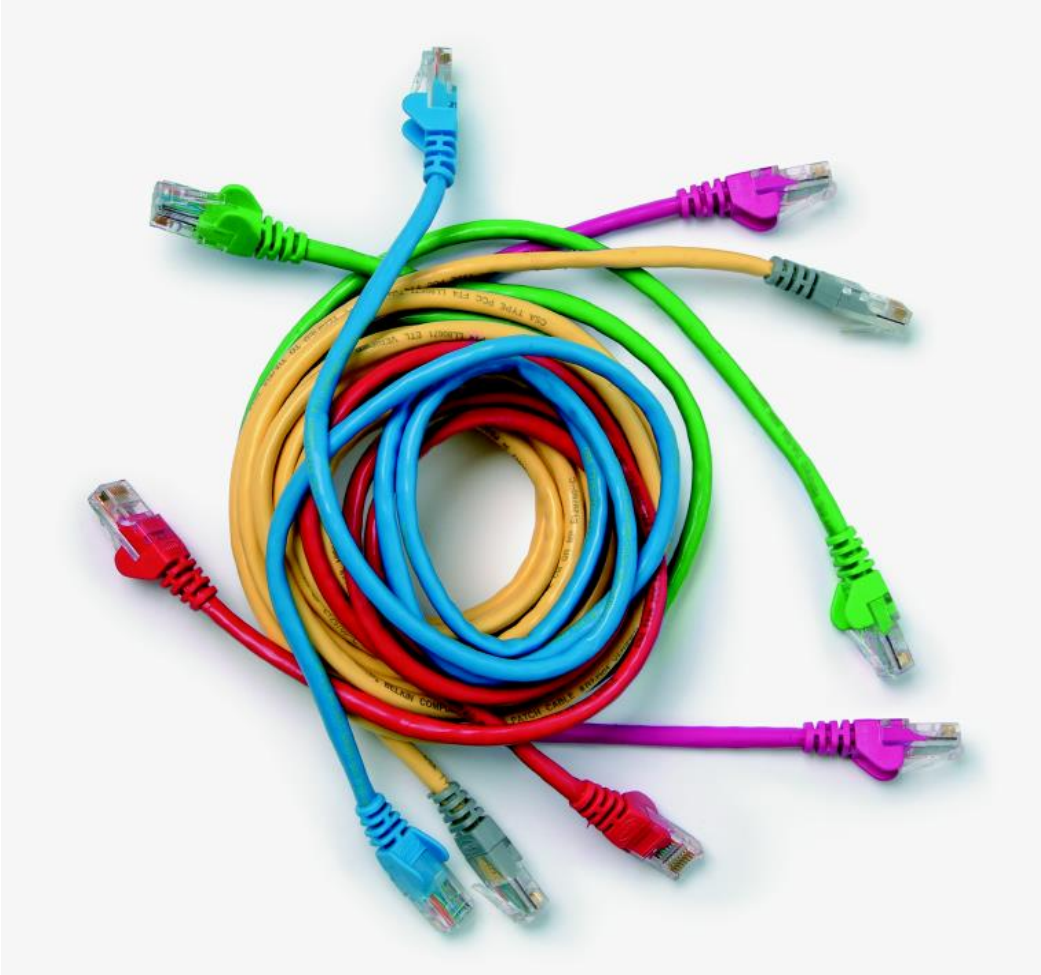

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Level 3 Software testing (7540-043) Assignment B

Introduction – Information for Candidates

About this document

This assignment comprises all of the assessment for Level 3 Software testing (7540-043).

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 **3 hours**.

Level 3 Software testing (7540-043)
Candidate instructions

Candidates are advised to read **all instructions** carefully before starting work and to check with your assessor, if necessary, to ensure that you have fully understood what is required.

Time allowance: 3 hours

Assignment set up: A scenario is provided for candidates in the form of a company specification for a service they require.

This assignment is made up of one task

- **Task A** - provides a specification for the software which requires testing.

Scenario

You are employed as a consultant for Ultra Design Systems who design software for clients. As an employee of Ultra Design Systems, you have been asked to test completed software for recording the booking of theatre seats. The specification for the software is supplied in Appendix A.

Task A

In this task you are required to carry out testing of the THEATRE booking software which has now been developed.

Note: For the purposes of this testing only tickets for the seats in rows A and F are printed to save paper.

1 **Prepare a test plan including:**
- **test specification**
- **test cases**
- **test data with expected results**
- **resources and scheduling.**

2 Use the test plan and test data to carry out a series of tests and record the actual results in a test log. Add comments for any discrepancies found between the actual and expected results.

3 **Provide evidence of testing eg printouts of output file, tickets and screen prints which must be cross-referenced to the testing.**

4 Use the test log to produce a report which:
- specifies the presence or absence of errors and
- makes proposals for rectifying errors and
- reports on the success of the test against the original software specification.

5 Please use the Answer Sheet provided to complete Task A5.
Explain the difference between functional and structural (white box) testing.

6 Please use the Answer Sheet provided to complete Task A6.
State which type of testing was used to test the THEATRE software.

7 Please use the Answer Sheet provided to complete Task A7.
Describe how automation can be used for software testing and state **one** type of testing which could benefit from using automation.

8 Please use the Answer Sheet provided to complete Task A8.
Explain the purpose and scope of integration testing and explain the use of stubs.

Note

- Candidates should produce the following for their assessor:
    - A test plan with test data and expected results
    - A test log that records and compares results and comments on any discrepancies
    - A report on test results
    - Cross-referenced evidence of testing: ie printed file output, tickets and screen prints as necessary to show test results
    - Completed Answer Sheet.
- At the conclusion of this assignment, hand all paperwork and removable media to the test supervisor.
- Ensure that your name is on the removable media and all documentation.
- If the assignment is taken over more than one period, all removable media and paperwork must be returned to the test supervisor at the end of each sitting.

Appendix A

Theatre bookings

The Theatre bookings program stores the seat booking details for a play in a file. The Theatre has 10 rows (A – J) and 20 seats in each row.
A booking seat plan is displayed on screen and a user can change a seat to sold or unsold depending on its current setting.

The program has been developed for a 32-bit Windows environment.

The opening screen has a File menu with the following options:

Option	Action
New	Create a new file
Open	Open an existing file
Save	Save the currently open file
Exit	Exit the program with an option to save the file

The format for an existing file is as follows:

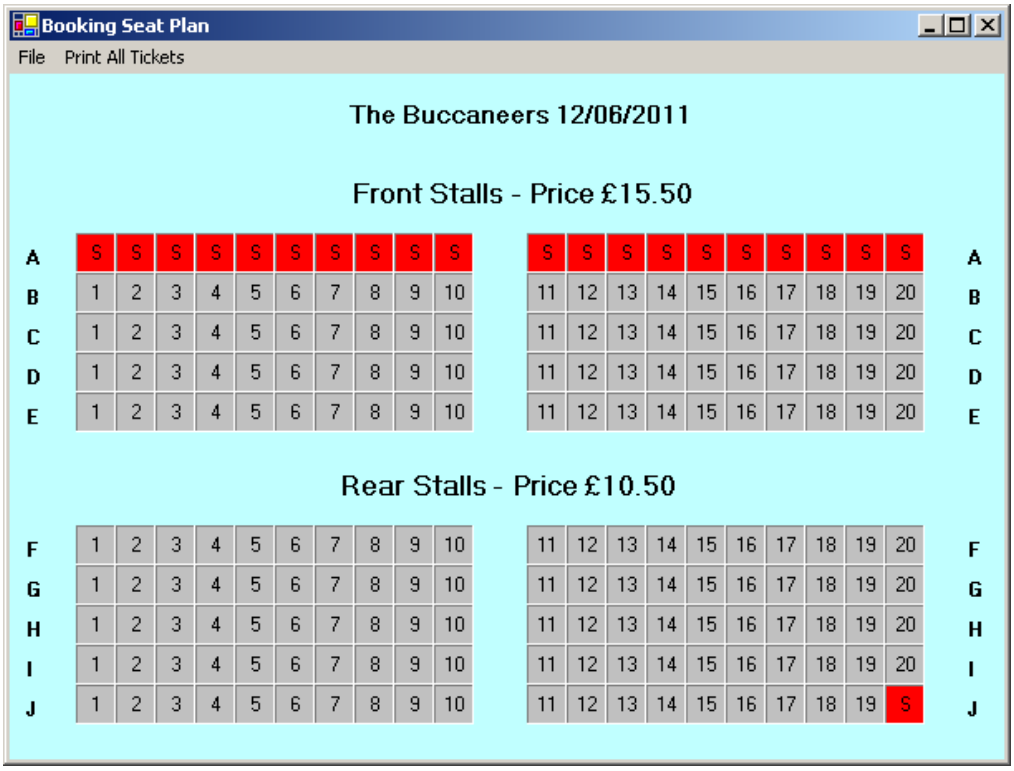
```
Little Shop of Horrors 20/09/2012
FFFFFFFFFFFFFFFFFFF
SFFFFSFSFFFFFFFFFFF
FFFFFFSFFFFSFFFFFFF
SFFFFFFSFFFSFFFFFFF
SSFFSFFFSSFFSFFFFFF
SFFFFFFFFFFFFFFFFFF
FFFFFSFFFFFFFFFFSFF
SFFFFFFFFFFFFFFFFFF
FFFSFFFFFFFFFFFFFFF
SSSSSSSSSSSSSSSSSSS
```

The play name and date are followed by the seat booking details. The seat booking details are for 10 rows (A – J) and 20 seats in each row. F indicates a seat is free and S indicates a seat is booked. The file can be created in a text editor eg Notepad.

The menu option **Print All Tickets** normally prints all the tickets ie for rows A to J. The tickets are printed seven to a page in the format shown below:

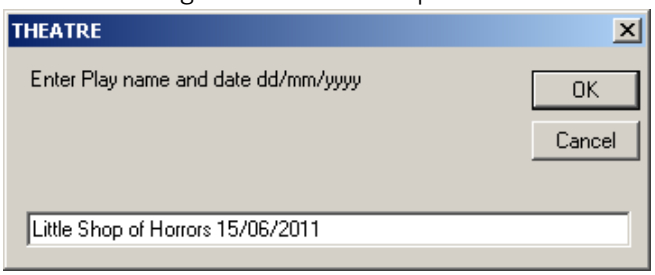
```
          TICKET:
Little Shop of Horrors 20/09/2012
          Seat Number A1
          Front Stalls £15.50
```

When a file is opened for a play a booking seat plan is displayed for the play, similar to the one shown below.



A booked seat is displayed with an S and a background of red. Clicking on a numbered seat changes it to booked (S and red). Clicking on a booked seat changes it back to a number.

The New option on the File menu creates a new file. A booking seat plan is displayed with all the seats unsold. The name of the play and the date the play is to be performed must be entered in the THEATRE dialog. No date check is performed on the date of the play.



When the file is saved any changes made to the booking seat plan are written to the file.

Error Codes

The following error codes are used:

Error Code	Error Message
001	"File incorrect format or missing or dialog cancelled"
002	"File open error or dialog cancelled"
003	"File save error"

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