Qualification:	Assessment title:
Unit: Object Oriented Programming	**Version:** SAMPLE *(if applicable)*

Deadline date	Start date
You must hand the completed assessment in by the above date.	

Assessment conditions

Location:

Security of work:

Supervision:

Assessment Composition

Task	Evidence	Unit coverage (LO & AC references)	Grading ref
1	Written Report – Electronically submitted in MS Word	1.1	Pass (1 mark), Merit (2 marks), Distinction (3 marks)
2	Written Report – Electronically submitted in MS Word	2.1, 2.2	Pass (1 mark), Merit (2 marks), Distinction (3 marks)
3	Source code of the produced solution – Electronically submitted	3.1, 3.2, 3.3, 3.4	Pass (1 mark), Merit (2 marks), Distinction (3 marks)
4	Written Report – Electronically submitted in MS Word, Code for onscreen help program - Electronically submitted	4.1, 4.2, 4.3, 4.4, 4.5	Pass (1 mark), Merit (2 marks), Distinction (3 marks)

Health and Safety

You must always work safely, in particular while you are carrying out practical tasks.

You must always follow any Health and Safety regulations and codes of practice relevant to your work.

If your assessor observes you working in a way that is unsafe for yourself or others, they will ask you to stop immediately, and tell you why.

Your assessor will not be able to reassess you until they are sure you are ready for assessment and can work safely.

Plagiarism

It is your qualification, so it must be your own work.

Your assessor must be able to identify which work you have done yourself, and what you have found from other sources. It is therefore important to make sure you acknowledge all of your sources.

You assessor can show you how to do this for the assessment you are doing.

Notes to candidates:

- This assessment has been written to make sure you have the opportunity to show that you have met the learning outcomes of the unit.
- You will be marked against the assessment criteria of the unit and the grading criteria for the qualification. You should read these carefully before you start so you know what you need to do.
- You should make sure that you do your best in the assessment so that the evidence you hand in shows your best performance for this unit.
- You may ask your assessor for help in understanding the tasks, but all of the work you hand in must be your own work.
- If you have a good reason for needing more time, you will need to explain the reasons to your assessor and agree a new deadline date. Changes to dates will be at the discretion of the assessor, and the centre may not mark work that is handed in after the agreed deadlines.

Scenario/context

You work as a software developer for a software company called Programming Solutions Limited which won a contract developing modern Object Oriented programming solutions for an airline.

Task 1:

The director of the company has hired several employees recently and before starting on the contract work has asked you to brief the new employees on the principles of Object Oriented Programming. You have been asked to produce a report containing between 500 and 1,000 words explaining the principles, characteristics and features of Object Oriented Programming.

Evidence to be handed in: Electronically submitted report in MS Word format

Task 2:

The next phase of the contract involves designing an Object Oriented program which will be used as the airline's booking system. Specifically you have been asked to design a GUI and associated methods and events that will allow a user to select THREE criteria for an intended flight. The criteria are:

- Departure Airport
- Destination Airport
- Type of Seat

You should have about 8 airports and three different types of seat (Economy, Business, First Class)

1. Devise a GUI that uses Combo Boxes, Radio Buttons and at least one Check Box. The Departure and Destination List must be displayed in alphabetical order.

2. Departure and Destination airports cannot be the same.

3. It should be possible to book a second leg, onward from the first destination or back to the original departure airport.

4. Passenger name should be recorded and a Booking Reference assigned.

5. When completed, details of the flight(s) booked should be displayed on the screen for the user to confirm.

6. On confirmation, details should be written to a file.

7. A password-protected Maintenance Suite should be available to allow airports to be added or

removed from the lists, and to view booking files.

Your task is to prepare a report describing the **design** of a solution for the above, including identifying the objects and data and file structures required. The report is to be between 500 and 1,000 words.

Evidence to be handed in: Electronically submitted report in MS Word format

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Task 3:

Based on the requirements of the report you developed in Task 2, Implement the program in Java, using the IDE of your choice.

Evidence to be handed in: Electronically submitted source code of the application

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Task 4:

To conclude the project, you have been asked to produce a report containing the following aspects:

- Testing of the application
- Analysis of actual test results against expected results to identify discrepancies
- Recommendations for improvements to the program
- Documentation for use of the program by other programmers
- A program with onscreen help to guide users of your program

Evidence to be handed in: Electronically submitted report in MS Word format, Electronically submitted code for onscreen help program

Now make sure you have:

- **filled in the front sheet correctly for all of your written work including the declaration of authenticity**

- **labelled any loose sheets or products carefully with your name and the qualification and assessment titles, and date.**