



Government of **Western Australia**
School Curriculum and Standards Authority



COMPUTER SCIENCE

GENERAL COURSE

Externally set task

Sample 2016

Note: This Externally set task sample is based on the following content from Unit 3 of the General Year 12 syllabus.

- Types of system development methodologies
- Appropriate hardware components for a computer system designed for a specific purpose
- The purpose of an ICT code of conduct
- Create context diagrams using Yourdon/DeMarco notation
- Issues related to use of online databases
- Design considerations for visual interfaces
- Sketch a visual interface for users of a database

In future years, this information will be provided late in Term 3 of the year prior to the conduct of the Externally set task. This will enable teachers to tailor their teaching and learning program to ensure that the content is delivered prior to the students undertaking the task in Term 2 of Year 12.

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Computer Science

Externally set task

Working time for the task: 60 minutes

Total marks: 60 marks

Weighting: 15% of the school mark

Read the following scenario and answer the questions that follow.

When a potential guest contacts Carl's Cosy Cottages, a local guesthouse, to make a booking, the guest provides the intended arrival and departure dates. The owner checks the bookings sheet to see if there are any rooms available, and then informs the person of room availability and room price per night.

If the person wants to make a booking, the owner records the booking details in the bookings sheet.

The owner asks the person if they would like to hire a bicycle during their stay. If they require a bicycle, the owner records the bike hire details in the bookings sheet.

The owner informs the person of the payment options and they reply, advising the owner of the option they would like to use. The chosen payment options are then recorded in the bookings sheet.

You have been requested to develop a bookings database for Carl's Cosy Cottages.

- 1(a) List and describe **two (2)** types of system development methodologies that could be used to create a bookings database system for Carl's Cosy Cottages. (6 marks)

Methodology 1: _____

Methodology 2: _____

- (b) Describe **one (1)** advantage and **one (1)** disadvantage of one of the system development techniques you identified in Question 1(a). (4 marks)

Advantage: _____

Disadvantage: _____

2. Describe the **five (5)** main components required for a computer system that would be suitable to operate the bookings database for a small business such as Carl's Cosy Cottages. (10 marks)

Component 1: _____

Component 2: _____

Component 3: _____

Component 4: _____

Component 5: _____

- 3(a) Provide **two (2)** reasons why an ICT code of conduct is necessary for Carl's Cosy Cottages staff to follow for tasks, such as, using the computer system to make a booking for a guest. (6 marks)

Reason 1: _____

Reason 2: _____

- (b) List **four (4)** elements that should be included in the Code of Conduct for this business. (4 marks)

Element 1: _____

Element 2: _____

Element 3: _____

Element 4: _____

4. Create a context diagram of the bookings system for Carl's Cosy Cottages. **(10 marks)**

5. Describe **two (2)** visual interface design considerations that need to be incorporated into the design of the data input form when creating the form for the bookings database. **(6 marks)**

Consideration 1: _____

Consideration 2: _____

6. Use the partly completed diagram below to create a booking enquiry form for the bookings database. Complete and annotate the diagram below to indicate the following: input fields (including labels), use of colour for both text and background. **(8 marks)**

Carl's Cosy Cottages Booking Enquiry		
User help instructions: Enter the expected arrival and departure dates.		

7. Carl's Cosy Cottages plans to enable booking enquiries to be available online. Describe **two (2)** issues related to the use of online databases that the owners of Carl's Cosy Cottages will need to consider. **(6 marks)**

Issue 1: _____

Issue 2: _____
