



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



**Western Australian Certificate of Education
Examination, 2015**

COMPUTER SCIENCE
Stage 3

SOURCE BOOKLET

This information relates to questions in Section Two.

Refer to this case study to answer Questions 21 and 22.

Many public and private organisations seek to improve efficiency by implementing computerisation. Medical practices are no exception, given that accurate patient data is important for effective, safe diagnosis and treatment. The secure storage of patient records is important for patient privacy.

One medical practice seeks to add to its existing patient records system. Part of the new system functionality will be a tablet app that will run on both the Android and iOS operating systems. The app will allow patients to view general information about the practice and send a request for an appointment with a doctor.

When a new patient makes an appointment with the medical practice, the following procedure is followed for consultations that require checking on blood pressure:

1. The patient creates an account on the app with their details stored in the Patient database.
2. Using the app, an appointment is made, which is recorded in the Appointment database.
3. A doctor is assigned the appointment, with their details being taken from the Doctor database.
4. The medical practice sends an email confirming the appointment to the patient.
5. During the consultation, the doctor takes two blood pressure readings - 'S' and 'D'. These results are stored in the Blood Pressure Reading database.
6. Once the doctor checks the results and patient's history, a Medical Summary and a Medical Script for any medications are produced. The script is created and given to the patient.
7. A bill is generated for the consultation, which is recorded in the Billing database. Medical insurance pays for most of the bill. Any 'gap', costs above what medical insurance pays, is met by the patient.
8. Using the app, an invoice is sent to the patient for the gap amount.
9. Once the patient pays the gap, a receipt is sent within the app confirming payment.
10. Each month the office manager of the practice also receives a Monthly Blood Pressure Readings Summary.

During the consultation, the doctor may use specific equipment (in this case a blood pressure monitor) to take readings from a patient. These readings are sent via Bluetooth from the device to the doctor's computer.

Refer to the table below to answer Question 22(e).

Patient records										
PatientID	GivenName	FamilyName	Address	Suburb	Postcode	Telephone	Email	Gender	DOB_Year	DOB_DM
098765	Anil	Patient	1 Short St	Kallaroo	6025	08 7300 1616	AP@my.mail.com	Male	1970	30/07
096143	Susan	Valid	12 Long Rd	Rossmoyn	6148	08 7313 0099	SUV@our.mail.com	Female	1966	24/12
094888	Jeremy	Concise	1B Round Bnd	North Perth	6006	08 7200 7653	JC@my.mail.net	Male	1954	19/05
094767	Carey	Ballast	3452 North Hwy	Bindoon	6502	08 7554 7854	CB@the.mail.com	Male	1943	11/11
100002	Bernice	Black	32 Dark Lane	Bullcreek	6149	08 7410 7809	BBB@rightmail.net	Female	1979	01/03
101895	Barry	Boan	37 Myers Cove	Wanneroo	6065	08 7400 9999	BUB@amail.com	Male	1991	23/04

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