

Insert for Section C – Case study

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Kodora Technology

Kodora Technology is a large Victorian company with an annual turnover of \$1.2 billion. The company manufactures and develops hardware and software designed as intelligent home systems. Some of their products include refrigerators that can place online orders when food items run out, automated vacuum cleaners and voice-activated lighting systems.

The head of the company, Serai, wants Kodora to be a household name across the world. She knows their sales in Australia are excellent and believes her company's products will sell very well in overseas markets. Kodora's software innovation team has just begun working on creating an intelligent personal assistant, Kodo. Kodo is an artificially intelligent networked voice-recognition system that acts similar to a search engine. Serai plans on releasing Kodo in Australia, New Zealand, Singapore and China, so it is very important to her that the system can be marketed and used in multilingual environments. She also wants it to be easy to install so that people who buy it will not need to pay a large amount of money for professional installation.

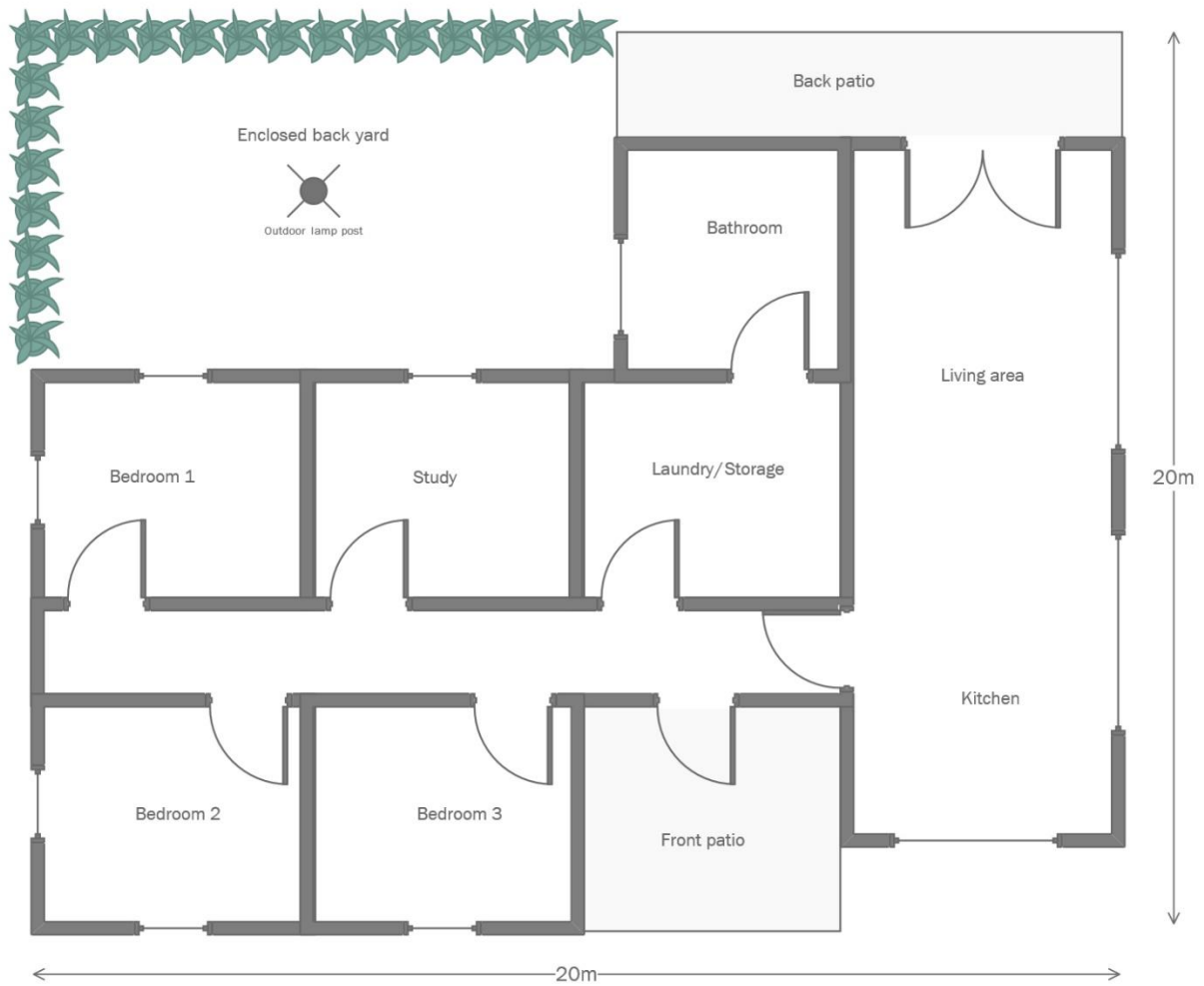
The Kodo system will use a mobile wireless network (4G) to connect to the internet, so it can be used in any location that receives mobile phone coverage. The system consists of at least two units – a main unit that contains the 4G connection, and one or more local receivers. Each receiver can listen for voice activation and transfer the recorded request to the main unit via a Class 2 Bluetooth connection. Receivers are very small and can be installed attached to walls and ceilings. At least one receiver is needed for the system to work; the main unit is only used for data transfer and speech-recognition processing.

Users activate Kodo by saying clearly 'Hello, Kodo' and then making a voice request saying what they want Kodo to do. Each Kodo receiver has a built-in microphone that records these requests in digital format. The receiver then transmits the request via Bluetooth to the main unit's internal storage system. The main unit uses speech-recognition software and natural-language processing to transcribe the request into text. The transcribed text is stored on the main unit's internal storage system. It is then analysed using a specialised online search database, owned by Kodora, to detect what the user wishes. Once this is done, the main unit processes the user request and returns the output back to the receiver, which plays it back to the user. After the output is returned, the main unit deletes the initial recording from its internal storage system but keeps the transcribed text in its internal database.

The Kodo system keeps statistics every time it is used. For each request, it tracks the transcribed text the receiver used to make the request, and the date and time that the request was made. A user can use any networked device to log in to a secure reporting system on the main unit to request a summary report. The information provided includes how frequently Kodo was used per day, which receiver was used most often, and a list of all requests made for a given time period (30 days, 60 days etc.). The report system also allows a user to delete all request history from the main unit.

Satoshi is a lead developer at Kodora working on Kodo. As part of testing, Satoshi wants to install Kodo in his house. As Kodo is not yet released, he needs to make sure that he keeps the hardware and software secure at all times. His house currently has locks on doors and latches on windows.

A diagram of Satoshi's house is on the page opposite.

Diagram of Satoshi's house**END OF INSERT**