



# Level 3 Cambridge Technical in IT

05839/05840/05841/05842/05877

## Unit 3: Cyber security

**INSERT**

**Monday 21 May 2018 – Morning**



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## Digital Personal Assistant

### Background

A digital personal assistant is a device that responds to vocal commands. It is activated by a keyword and will then run a command based on the vocal input from the user. Commands can include, amongst other things:

- web searches;
- playing music;
- creating/amending shopping lists;
- creating/amending to do lists;
- purchasing items from the web.

### Mr. Daka

Mr. Daka lives at home with his wife and two teenage children. He is interested in new technologies and their ability to automate everyday tasks.

Mr. Daka has purchased a digital personal assistant for his home. He has integrated the device into his home automation system. This has included:

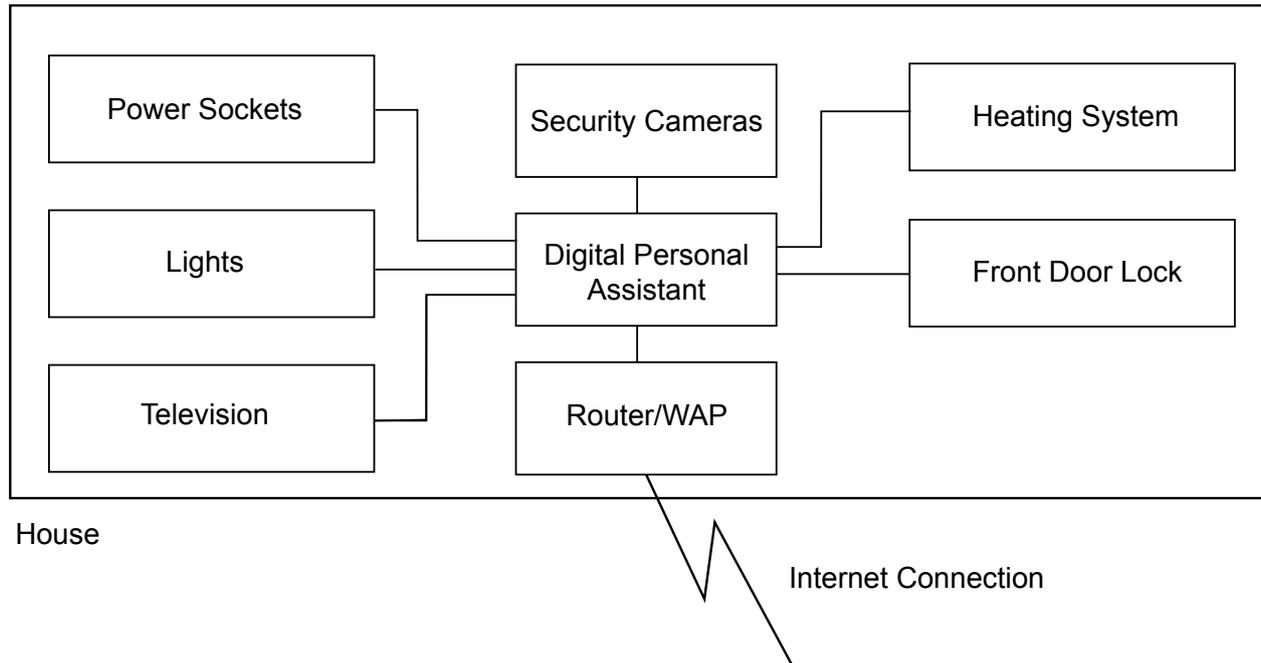
- security cameras;
- heating system;
- home entertainment systems;
- lights and power sockets;
- home locking mechanisms.

### Set Up

Mr. Daka has a single internet connection into the house which plugs into a hybrid router, combining routing, switching and a wireless access point (WAP) into a single device, given to him by his internet service provider.

Mr. Daka has set the system up so that he can control his devices and change settings through a variety of apps on his smartphone. This allows him to perform tasks such as turning lights on and off, adjusting heating, opening the front door and viewing security cameras when he is away from his home.

### Diagram of Digital Personal Assistant and Home Automation Integration



To prepare for the examination, you should research the following themes:

- information needed by an attacker to gain access to the digital personal assistant and connected devices;
- different devices that can be connected in a home automation system and the implications for each type of device of being attacked;
- methods that could be used to exploit and mitigate against vulnerabilities in the different connected devices;
- different types of attackers who might want to access the digital personal assistant and their motivations.



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