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## ACHIEVEMENT EXEMPLAR 2022

# 1



NEW ZEALAND QUALIFICATIONS AUTHORITY  
MANA TOHU MĀTAURANGA O AOTEAROA

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COMMON ASSESSMENT TASK

### Level 1 Digital Technologies 2022

#### 91886 Demonstrate understanding of human computer interaction

Credits: Three

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of human computer interaction.	Demonstrate in-depth understanding of human computer interaction.	Demonstrate comprehensive understanding of human computer interaction.

Type your School Code and 9-digit National Student Number (NSN) into the space below. (If your NSN has 10 digits, omit the leading zero.) It should look like “123-123456789-91886”.

Make sure you have the video file.

**Answer ALL parts of the assessment task in this document.**

You should aim to write **800–1500 words** in total.

Your answers should be presented in 12pt Times New Roman font, within the expanding text boxes, and may include only information you produce during this assessment session. Internet access is not permitted.

**Save your finished work as a PDF file** with the file name used in the header at the top of this page (“SchoolCode-YourNSN-91886.pdf”).

By saving your work at the end of the assessment, you are declaring that this work is your own. NZQA may sample your work to ensure this is the case.

## INSTRUCTIONS

The video shows the user, Jackson, carrying out different activities using two similar websites. The task in this assessment requires you to review the interactions in terms of the usability heuristics below.

Read all parts before you watch the video. You may play, pause, and restart the video as often as you like. *Note: The video has no sound.*

You are encouraged to illustrate your answers with screenshots from the video.

## RESOURCE: Nielsen's 10 Usability Heuristics

"Usability heuristics" are general principles or "rules of thumb" to help measure the effectiveness of a user interface. You will be familiar with Jakob Nielsen's 10 usability heuristics listed below.

1. Visibility of the system's status
2. Match between the system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognise, diagnose, and recover from errors
10. Help and documentation

Source (adapted): Nielsen, J. (1994, updated 2020). 10 Usability Heuristics for User Interface Design. <https://www.nngroup.com/articles/ten-usability-heuristics/>

**SCENARIO: Shopping online for video equipment**

Jackson is an 18-year-old looking to purchase some items to kick-start his professional YouTubing career. He needs a good microphone, a high-quality camera, a tripod, and an LED ring light. He will purchase these items online as he feels he can get a better deal if he compares prices on at least two websites.

You will be provided with a video which shows Jackson trying to complete several activities using two different websites. The two websites are *PB Tech* and *JB Hi-Fi*.

Activity	Timestamp (PB Tech)	Timestamp (JB Hi-Fi)
(1) Setting up an account	00:00	01:05
(2) Browsing products and adding to wish list	02:34	06:28
(3) Checking product stock levels and finding the nearest store	08:45	09:18
(4) Using the help feature	10:01	10:42
(5) Updating account details and logging out	11:42	12:20

**ASSESSMENT TASK**

- (a) Choose a website – *PB Tech* or *JB Hi-Fi*.

Pb tech

Describe the role of your chosen website.

Pb tech is a website devoted to the sales of “tech” goods. It is an online store where users can browse a range of items and purchase them online.

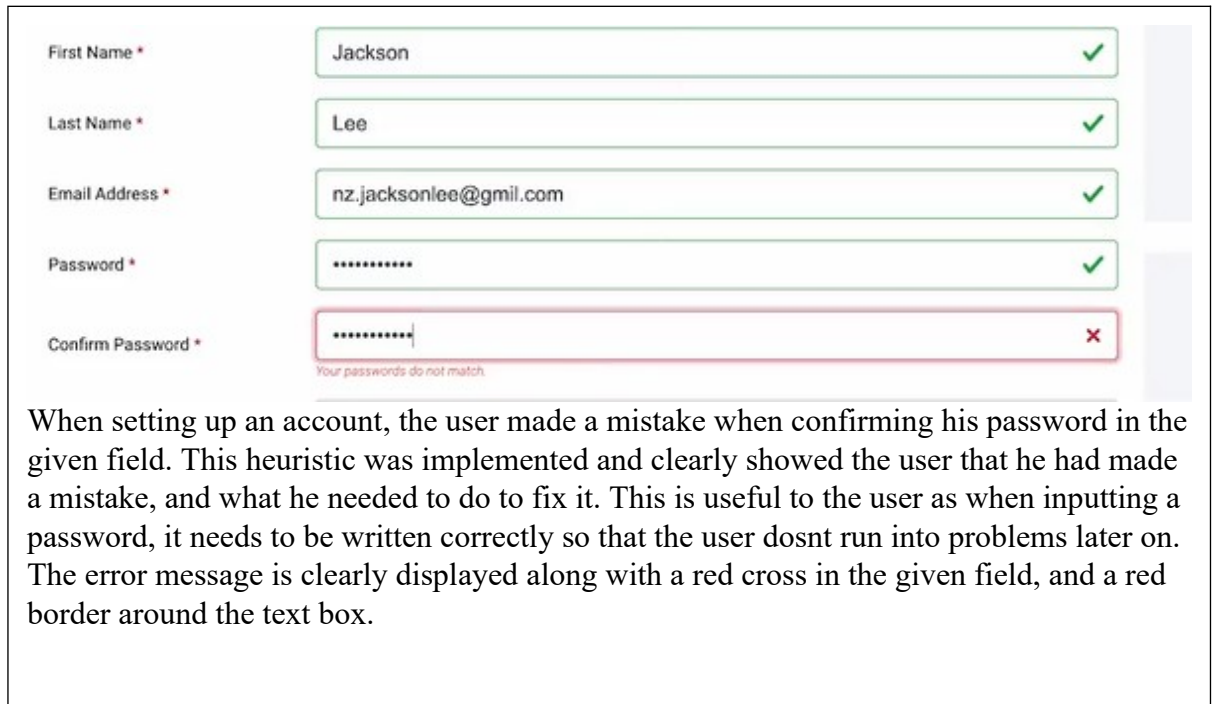
(b) Which [usability heuristics](#) allowed Jackson to complete the following activities? How did they achieve this?

(i) **Setting up an account**

Chosen heuristic:

Help users recognize, recover and diagnose errors.

How did this this heuristic help Jackson set up his account?



The screenshot shows a registration form with five fields: First Name, Last Name, Email Address, Password, and Confirm Password. The first four fields have green checkmarks, indicating successful input. The Confirm Password field has a red border, a red 'X' icon, and a red error message below it: "Your passwords do not match." This visual feedback is a key usability heuristic for error prevention.

When setting up an account, the user made a mistake when confirming his password in the given field. This heuristic was implemented and clearly showed the user that he had made a mistake, and what he needed to do to fix it. This is useful to the user as when inputting a password, it needs to be written correctly so that the user dosnt run into problems later on. The error message is clearly displayed along with a red cross in the given field, and a red border around the text box.

Chosen heuristic:

Error prevention.

How did this this heuristic help Jackson set up his account?

Error prevention is used when the user is signing in to the site, and they are asked to input their birth date. The heuristic is shown when instead of being free to type in their birth date, they are given a calendar to choose dates from. This helps prevent user error when putting in their birth date and also stops users being able to put in dates that don't exist, like for example "12223/09/8901".

The image shows a registration form with the following fields and values:

- First Name \*: Jackson ✓
- Last Name \*: Lee ✓
- Email Address \*: nz.jacksonlee@gmail.com ✓
- Password \*: [Redacted] ✓
- Confirm Password \*: [Redacted] ✓
- Phone \*: 0213456789 ✓
- Preferred PB Store: New Plymouth ▼
- Membership Key: Only if you are part of a membership group
- Gender: Male ▼
- Birthday: [Calendar]

The birthday field is highlighted with a blue circle and contains a calendar for August 2022. The date 22 is selected. The calendar table is as follows:

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Below the birthday field, there are checkboxes for:

- I agree to the privacy policy \*
- I'd like to become a PB Inside shipping offers (Recommendation) \*

\* Required fields

I'm not a robot

reCAPTCHA  
Privacy - Terms

Register

(ii) Browsing products and adding to wish list

Chosen heuristic:

Visibility of system status.

How did this this heuristic help Jackson browse products and add them to his wish list?

Visibility of system status entails that the user should be made aware of the systems status when

The screenshot displays three Logitech webcam products. The first is the Logitech C270 HD Webcam, priced at \$58.50. The second is the Logitech C920 HD Pro Webcam, priced at \$126.74, with its 'Add To Cart' button circled in blue and showing 'Adding...'. The third is the Logitech 4K Pro Webcam, priced at \$246.74. Each product listing includes a star rating, a 'Click & Collect' status, and a 'Ships today' indicator.

completing a task, or loading something in. this heuristic was shown when the user clicks the “add to cart” button, and the button turns grey and tells the user that its “adding...” . This is a god example of visibility of system status as the user is informed of what the system is doing after the button is clicked. After this, the cart icon then has a number 1 next to it, showing the user the systems status. As soon as you add an item to cart, user is given a popup letting them know that the item they chose has succesfully been added to their cart. This lets the user know the visibility of system status.

The image shows a screenshot of an e-commerce website. At the top, there is a navigation bar with a search bar, a user profile for 'Jackson' with 0 items, a 'Wish List' with 3 items, and a shopping cart icon with a total of '\$126.74 Inc.' and 1 item. Below the navigation bar, there are social media icons for Facebook, YouTube, Twitter, Instagram, and LinkedIn. A large banner for 'Logitech Video Conferencing Solutions' features a Logitech webcam. Below the banner, there are filters for 'SORT BY Most Relevant', 'Hide out of stock', and 'GST Inclusive'. The 'Items per page' is set to 96. A product listing for a 'Logitech C920 HD Pro Webcam' is shown with a price of '\$58.50 inc GST' and a 'Save: \$19 (24%)' discount. The MPN is 960-000584. A confirmation modal is open, stating 'Product added to your cart.' and 'You've added the Logitech C920 HD Pro Webcam to your cart.' The modal includes a 'Continue Shopping' button and a 'Proceed to Cart' button. Below the modal, there is a section titled 'People who bought this also bought...' with four product recommendations: 'BLUE Snowball ICE Versatile USB Microphone with HD Audio - Colour...' for \$105.00 inc., 'Jabra Enterprise Speak 510+ MS Bluetooth & USB Speakerphone...' for \$249.00 inc., 'Logitech MK235 Wireless Desktop Keyboard and Mouse Combo Full...' for \$39.00 inc. (save \$15 (28%)), and 'Dynamix C-HDMIHSE-2 2m HDMI 10Gbs Slimline High-Speed Cable...' for \$7.82 inc. The background shows a partial view of the product page for the Logitech C920 HD Pro Webcam, with a price of '\$126.74 inc GST' and a 'Save: \$42 (25%)' discount.

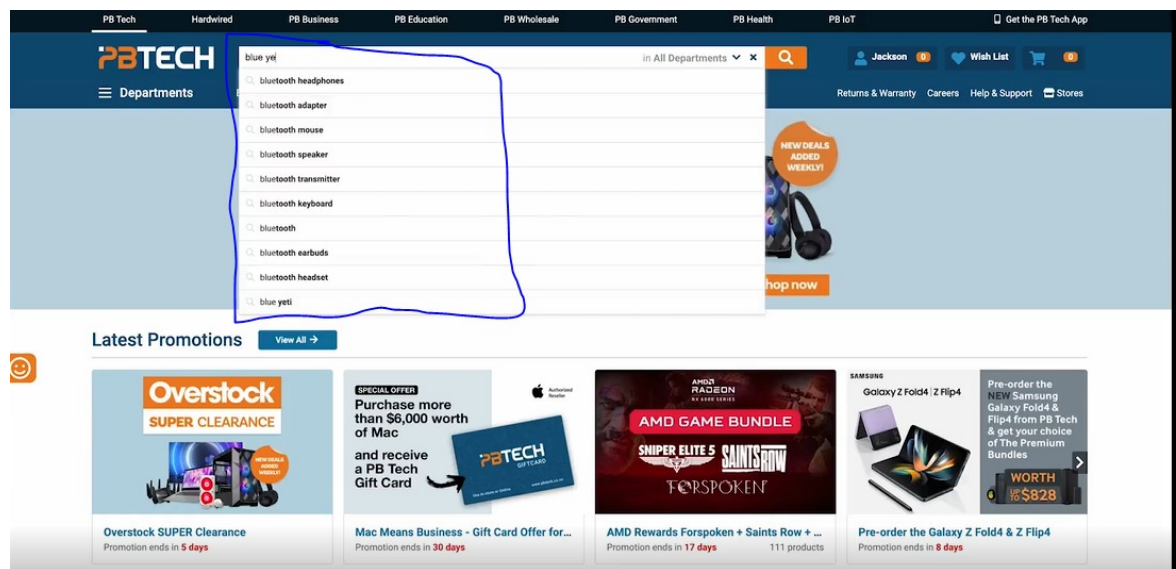


Chosen heuristic:

Recognition rather than recall.

How did this this heuristic help Jackson browse products and add them to his wish list?

This heuristic is implemented in the websites search function, where users are able to search for products that they would like to buy. In this website, when the user starts to type something into the search bar, the website automatically gives the user a list of search terms that are related to the letters that the user has put into the search bar. This is useful to users as when searching, they might not necessarily remember the full name of the product that they would like to buy. By using this heuristic the user is able to see a list of the search terms they might want to use and are then able to recognize the name of the product they are searching for, as opposed to having to remember it entirely.



(iii) Select a further activity from the table on [page 3](#). Evaluate the [usability heuristics](#) that enabled the chosen activity to be carried out efficiently and successfully.

When updating account details and logging out, visibility of system status let the user know if their password had been successfully changed. This is important because to not become confused, the user must know the systems status to know weather the thing that they have done has worked or not. This is successfully implemented through a popup of green text that appears when the user presses the change password button, letting them know that their password has been successfully changed.

- (c) (i) Which of the two websites was most effective in enabling Jackson to carry out the activities he needed to in order to purchase the video equipment? Justify your choice by comparing three or more features of the interfaces in terms of the [usability heuristics](#).

In terms of flexibility and efficiency of use, the pb tech website offers better user control when changing the view of the search results. It has 3 different options compared to the jbhifis 2 options. Over all the pb tech website was better at enabling the user to carry out the activities that he needed to purchase what he wanted to. This is because the pb tech website had much better error prevention when imputing birthdays, along with much clearer “help users recognize, diagnose and recover from errors” with its clear colored borders around the text boxes, green with a tick if the information was done correctly, and red with a cross if the information was imputed incorrectly.

- (ii) Referring to at least TWO usability heuristics, suggest how the usability of either interface could be improved.

In terms of help users recognize, diagnose and recover from errors the jbhifi website could be improved by having a more easily identifiable errors when the user inputs information wrong into the sign up page. It could be improved to be more like the pb tech website and have brighter more visible colours along with visible iconography such as ticks and crosses.

Another improvement that I would make to the jbhifi website in terms of aesthetics and minimalist design, is cutting down on the amount of products displayed on the landing page. Along with the vibrant yellow colour scheme of the website it makes the site feel much more cluttered and hard to navigate.

## Achievement Exemplar 2022

Subject	Digital Technologies Level 1		Standard	91886	Total score	04
Q	Grade score	Annotation				
1	A4	<p>A brief description of the chosen website is given.</p> <p>Candidate accurately describes four heuristics, two for each of the given activities.</p> <p>Screenshot examples are used.</p> <p>“Flexibility and efficiency” incorrectly identified.</p> <p>When comparing both interfaces the candidate makes comments about PB Tech’s superiority in terms of “Error prevention” and “Help users recognise, diagnose, and recover from errors” without any supporting evidence.</p> <p>Candidate provided two feasible improvements given in terms of “Aesthetic and minimalist design” and “Help users recognise, diagnose, and recover from errors”.</p>				