

Mobile App Development: A Gateway for the Digitally Confused

Author: Nicholas King (1909703),
Programme: BSc Applied Computing,
Supervisor: Gaynor Thomas
Email: 1909703@student.uwtsd.ac.uk

1. Introduction

The context of this project is to create an application that is made for educating people in digital literacy whom have never had the chance before.

Said individuals, likely older people or those within rural communities are susceptible to what is called the Digital Divide, the event of social groups separating because of digital skill differences.

The application's name is Compute Lit, and within the scope of this project, it is solely an Android Application.

3. Research

The digital divide is an issue that many organisations are working to mitigate it.

A primary finding by The Office of National Statistics^[1] demonstrates that, from an evaluation, a decline in people not using the internet is seen, going from 9 million adults to 5.3 million from 2011 to 2018. (Chart shown)

An observation by Lloyds Bank^[2] also shows the progress of the efforts against the Divide, with people who had cited that they had used the Internet recently reaching 95% in 2021 from 89% in 2016. (Chart shown)

Figure 1: The number of internet non-users has declined over time

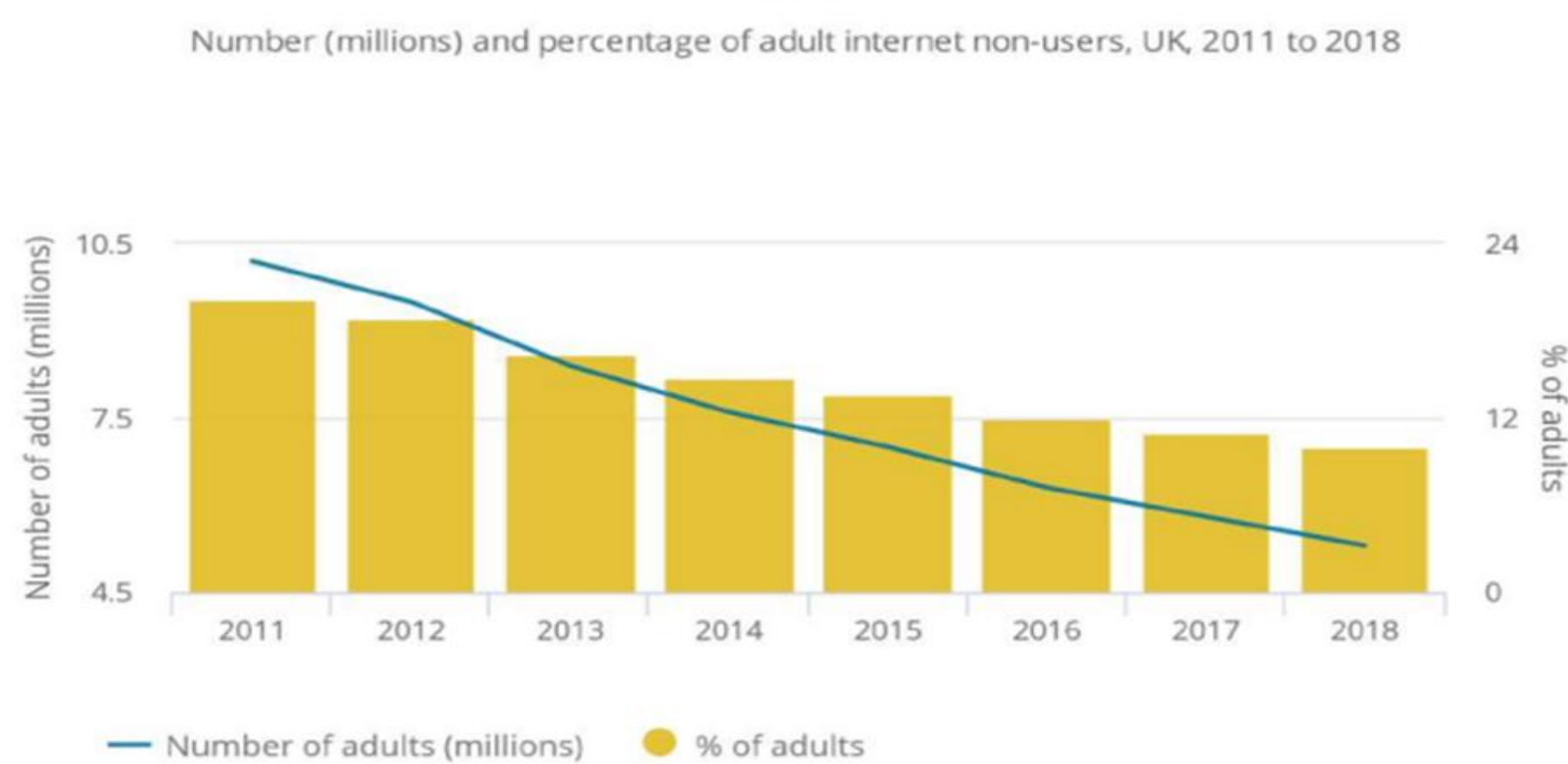
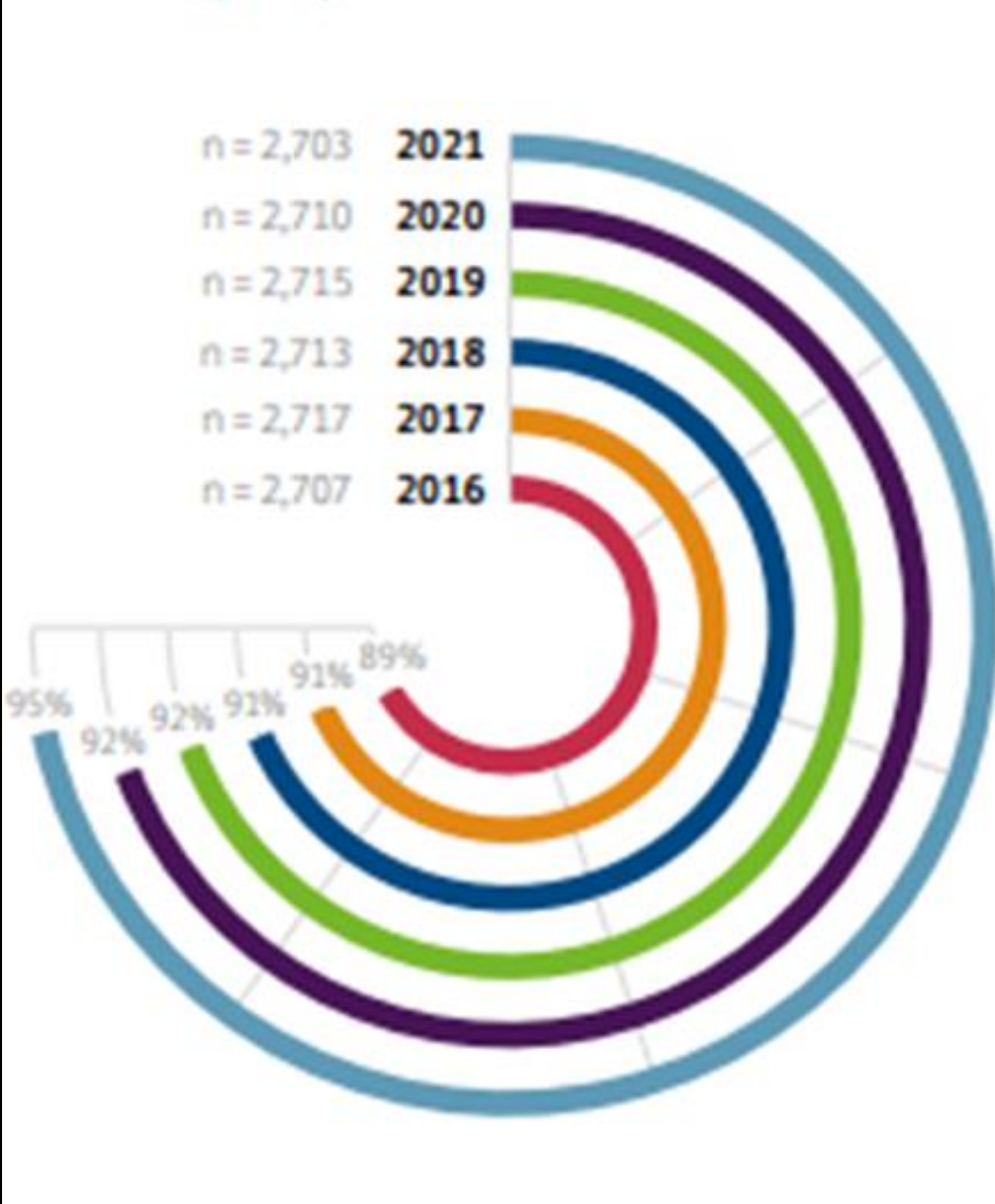


Figure 4. Have you used the Internet in the last three months? (e.g. desktop, laptop, mobile or tablet), 'Yes', 2016 to 2021



2. Aims and Objectives

The Aim of the project is to serve as a platform for any individual to become educated on digital literacy, and the general world of modern technology.

The aims to attain this goal involve:

- Making a pre-development survey for info gathering and suggestions
- Developing the App with original and suggested ideas in mind
- Making a Post-Test survey for info and feedback
- Testing the App with a prepared device (Android Phone/Tablet)
- Provide Post-Test-Survey

4. Methodology

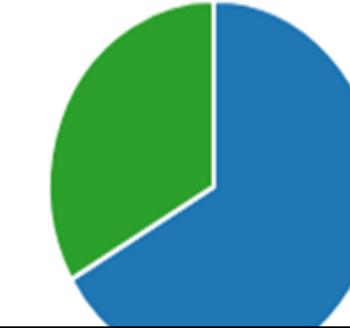
The plans for this app revolved around utilizing Android Studio and Microsoft Teams, for the development and surveys, respectively.

Survey 1 (12 participants) had shown several examples of individuals with varying levels of digital skills, from those who are used to the Industry-specific terms and concepts, to those who use it very lightly/casually. For example, in Q10 (shown), a majority stated their confidence in being able to do any task on a computer, whilst the remainder only stated that their success depends on the task or context.

10. If you were set a task on a computer, how do you think you would fare?

[More Details](#) [Insights](#)

- I'm confident I could do it 8
- I don't think I could do it 0
- I'm not sure, or it would depend on the task or context 4



3. How comfortable are you around technology after using the app? (0 point)

[More Details](#)

- Very comfortable 1
- Comfortable 3
- Indifferent 2
- Uncomfortable 0
- Very uncomfortable 0



6. Conclusion

After developing and testing the application, the Post-Test survey (6 participants) was ready. After analysing the results from each test, it has been observed that the confidence of the users after testing had improved. Previously, 1 user in Survey 1 had stated some discomfort with technology in its equivalent question. Now, however, opinions on technology are either neutral or positive. The app was also rated, with an average 8-star review by the participants.

Also shown is a table and chart demonstrating the scores, being a reasonable method of seeing the quality of each of the Module's quizzes.

It is concluded that the application has the potential to become a very useful tool in educating the public about Digital Literacy, including IT-related topics, as seen by the rating and the quiz results.

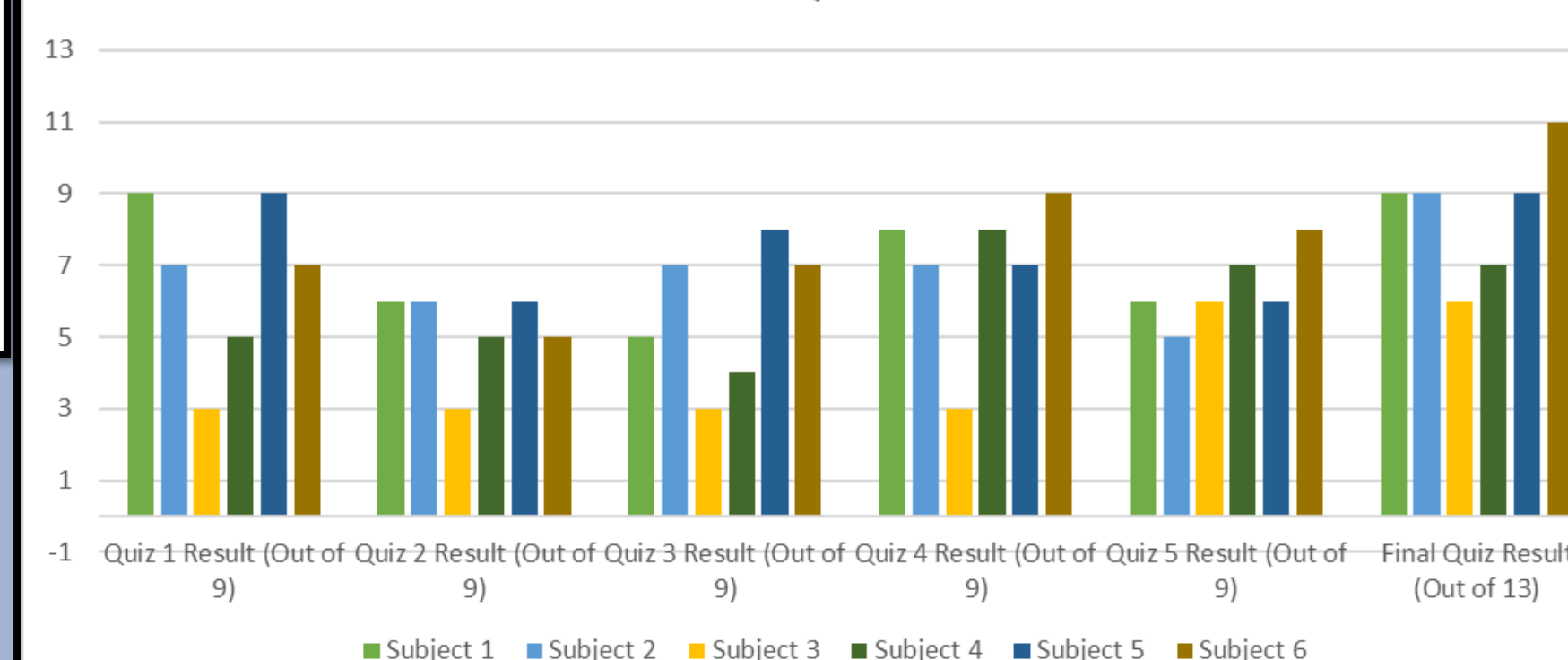
18. How would you rate the app overall? (0 point)

[More Details](#)

6
Responses

★★★★★★★
8.00 Average Rating

Overall Quiz Results



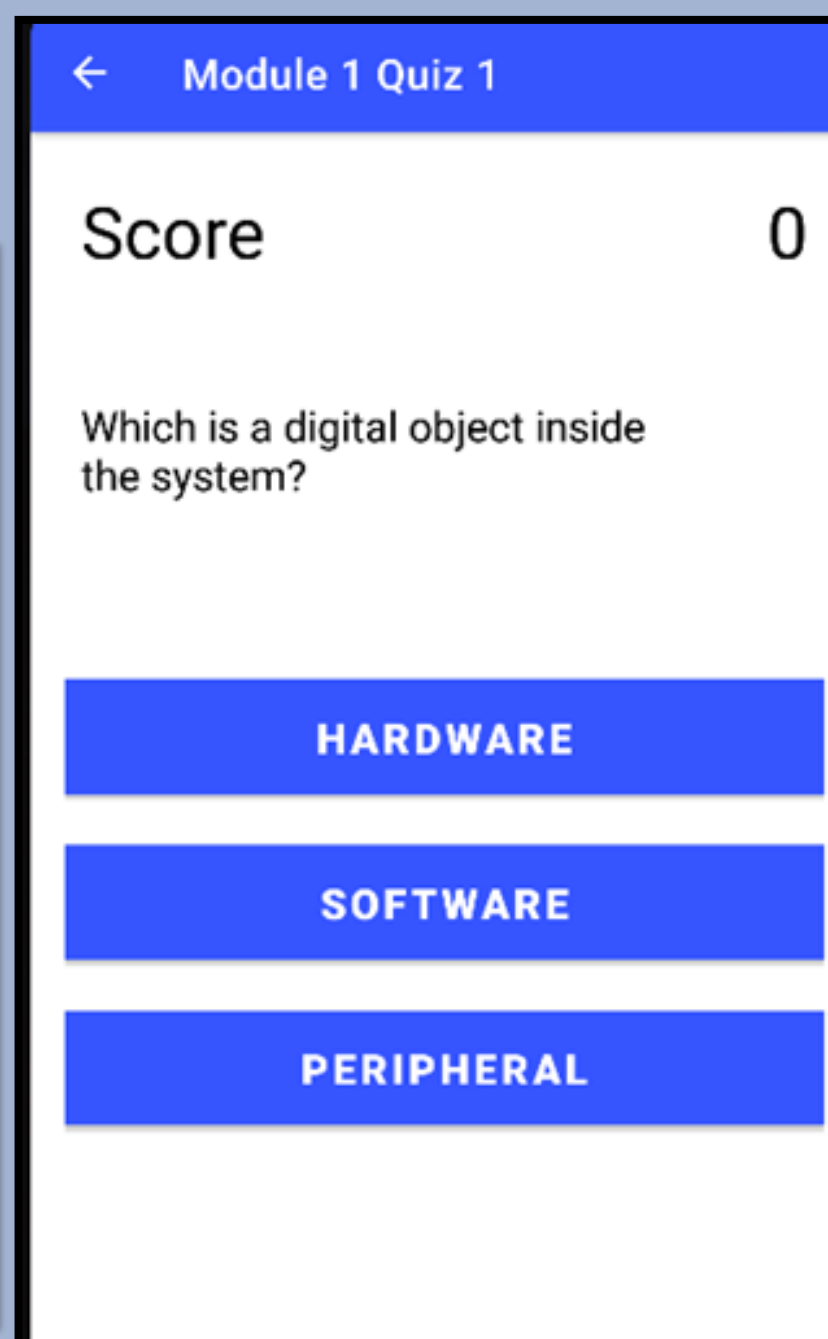
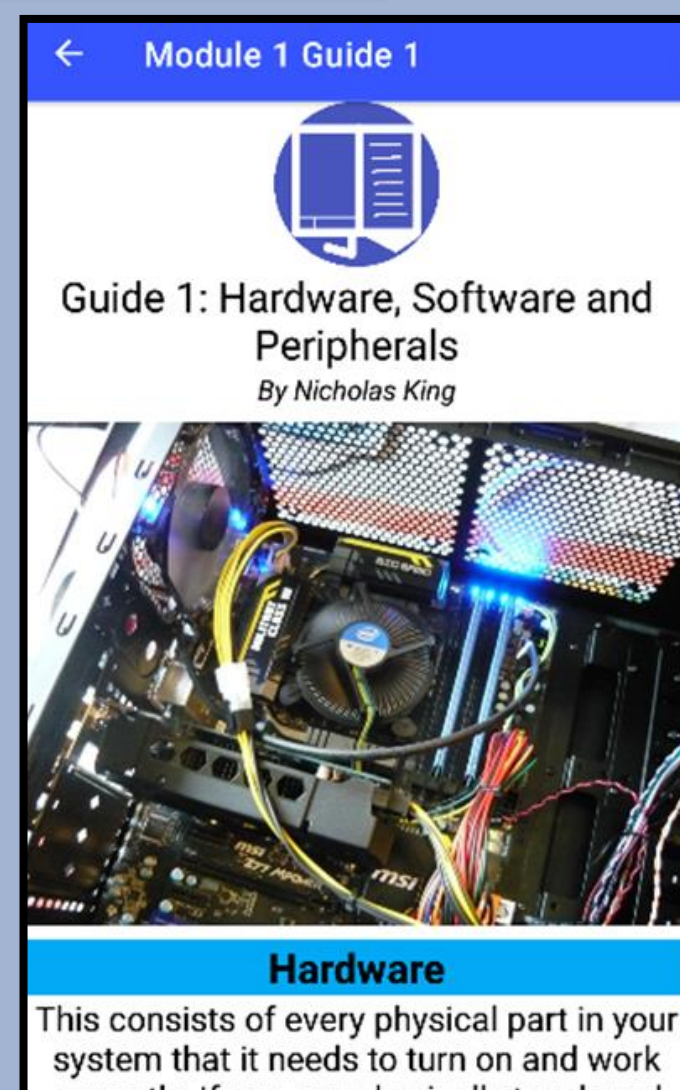
5. Design and Development

The entirety of the development cycle of this app revolved around the creation of the app's infrastructure, and the formulation of the Learning materials. Languages used include Java and XML for implementation and design. For the app's structure, a Module layout was chosen, making the future option for a level unlock system possible. Each module has Videos, Guides and Quizzes, adhering to a suggestion from Survey 1.

The videos use coding to fetch a specific video from YouTube.

The Guides are integrated into the app itself, avoiding complications from using external documents.

The quizzes and their result pages use specific coding to keep track of the current question, score and correct answers.



References

- [1] P. Serafino, "Exploring the UK's digital divide," Office for National Statistics, Mar. 2019.
- [2] Lloydsbank.com. [Online]. Available: https://www.lloydsbank.com/assets/media/pdfs/banking_with_us/whats-happening/210513-lloyds-consumer-digital-index-2021-report.pdf. [Accessed: 24-Nov-2021].

