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# Assessment Report

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### Standards <u>91898</u> <u>91899</u>

### Part A: Commentary

Candidates who prepared well for their assessments tended to do well. It is important to read the previous year's Assessment Report and the current year's Assessment Specifications as part of this preparation. Each year what is being assessed changes, and the information in these helps guide candidates in their preparation.

Candidates are advised to read all the questions before starting. In some cases, there was evidence of repetition in the answers that this would have prevented.

### Part B: Report on standards

91898: Demonstrate understanding of a computer science concept



Examination

Candidates responded well to the change in question format from the previous year's assessment. This allowed for improved ways to demonstrate understanding.

Candidates disadvantaged themselves where they gave similar answers to different questions (e.g. by discussing quantum computing in both parts (c) and (d)).

Where the candidate was able to discuss where they had visited a "New Zealand based organization" or had spoken to someone from their own school, they were able to provide much better evidence than those who mentioned an organization and then just gave general answers .

Teachers are advised to check the assessment specifications for 2022.

#### Observations

The change in format helped to showcase candidates' understanding of the material. The level of preparedness of most candidates suggests they were familiar with the assessment specifications. It is apparent that candidates and their teachers are making good use of resources such as the CS field guide. However, they are encouraged to go beyond this.

### Grade awarding

Candidates who were awarded Achievement commonly:

- chose a question in which they were able to show their breadth of understanding
- provided answers of sufficient depth (for example, in Question Two (b), candidates who observed that the password must have been stored by the website in plain text, and then discussed the way many people use the same password on multiple sites, demonstrated depth in their understanding).

Candidates whose work was assessed as Not Achieved commonly:

- repeated similar answers in multiple parts
- did not attempt to respond to enough of the question parts to show understanding
- gave confused answers, or appeared to be guessing

• gave answers that did not match the task.

Candidates who were awarded Achievement with Merit commonly:

- in Question Two (c), candidates who chose "future proofing" suggested methods that could make improvements rather than just suggesting current methods in use
- in Question Two (c). candidates who chose "human factors" discussed either common mistakes people make, and how organizations limit human error or how criminals exploit human weaknesses
- candidates are encouraged to link various aspects of this chosen "impact".

Candidates who were awarded Achievement with Excellence commonly:

- gave full, appropriate, detailed answers to all parts of their chosen question
- had no duplication in their answers
- in part (d), read the task fully and gave an answer that covered multiple aspects of the issue, while going into depth on key points.

#### 91899: Present a summary of developing a digital outcome

#### Examination

This standard requires candidates to present a summary of developing a digital outcome. When the candidate has produced a physical outcome, they need to make sure they discuss the digital component of it.

Candidates should be working at Level 7 of the New Zealand Curriculum, and in their projects they need to do more than simply use existing online generation tools and platforms to put together an outcome. They should, for example, be writing their own code, branding by creating their own logos and including these in their outcomes. They should be taking their own photographs and creating their own media content. While candidates are not expected to create the whole digital outcome from scratch, it is not acceptable to simply use a Wix or Google site, a design of an app or website in Adobe XD, a very basic logo, a poster or brochure using existing material or online generated images, infographics using Canva, etc. alone with no other authentic content in the outcome.

#### Observations

Candidates who completed a digital outcome at this level enjoyed success in this standard, and those who attained a higher grade had a project that had sufficient depth for them to show their knowledge, understanding, and process, to meet the requirements. Where projects were not at this level, responses were often repetitive.

The candidate's project should have a range of aspects and the Achievement Standard's criteria should fall out of the project if done the right way. Candidates need to write specifically about the digital outcome, especially the requirements, rather than simply generalising in regards to conventions, testing, feedback etc. without giving specific information about what eventuated and the decisions that were made. It is important for candidates to show their understanding of how relevant implications impact their outcome at more than just at a surface level, beyond functionality and aesthetics. It should be clear how these have influenced decisions made during the development of the outcome, rather than just the final outcome.

Candidates who had freedom to complete a project based on their interests or had freedom as to what the outcome could look like, with some say in the requirements and specifications, had a project where they understood the choices and decisions they made. Candidates whose projects followed a tight template, or those worked through an existing step-by-step resource, sometimes showed little understanding of the development process and their own personal decision making.

Candidates with a larger project that used a range of the standards to work through a design process tended to achieve higher grades. Their understanding of developing an outcome was often extensive and this allowed them to reach the Merit and Excellent criteria. Those who had worked on smaller projects with limited digital components tended to receive lower grades as they did not have the depth of knowledge required to support their answers.

The development process can include research, design and the development, or just the 'sprints' of the development.

Candidates who worked as part of a team / group should ensure their report focuses clearly on the digital component they individually contributed to the project. Each student should work on a separate digital component. For instance, if they created the models / graphics for a game then this aspect is what they should be writing about – they should give specific examples of the models they had to create, and how they made them; whether they needed to have animations; how they tested by exporting / saving the models in certain formats for the programmer to then incorporate into the game; and then any issues they had to address.

Teachers and candidates need to understand the intent of "explain", "address", "discuss", and "evaluate" as used in the Achievement Standard, noting that these words may not be used in the assessment itself.

### Grade awarding

Candidates who were awarded Achievement commonly:

- summarised how they developed a digital outcome
- described their digital outcome, briefly and clearly describing what they had created
- explained the decisions that were made during the development of the outcome in regard to the steps / milestones worked through and resources used in the project.
- when working as part of a team / group, focused on the project as a whole and used terminology like "we" / "us" rather than focusing on the digital component they individually contributed to the project
- had evidently followed a very structured program of teaching and learning, with a common theme / topic and everyone developing the same outcome.

Candidates whose work was assessed as Not Achieved commonly:

- omitted evidence that related to one or more of the assessment criteria for Achievement
- chose to write about a digital outcome that had limited scope
- did not describe the digital outcome they created
- did not explain the steps / milestones they worked through in the development process, or the resources used

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- wrote about planning, their planning tool and why they used it, but not the specific steps / milestones they worked through
- repeated the same information about use of a planning tool in part (a) (ii) and (a) (iii)
- described the non-digital part of an outcome but not the digital part.

Candidates who were awarded Achievement with Merit commonly:

- discussed requirements specific to the digital outcome that were not relevant to the Achievement Standard
- understood who end users were, and what requirements linked to end users within their project
- stated at least two requirements, and discussed how their digital outcome met these requirements
- discussed how their digital outcome addressed relevant implications of (two of) usability, functionality, and aesthetics
- discussed different examples to show how they met the criteria of the requirements and the implications.

Candidates who were awarded Achievement with Excellence commonly:

- when evaluating (at least two of) the decisions made during the development process, candidates made it clear whether the decisions were an advantage or disadvantage, and the impact they had on the outcome
- made links between the satisfaction of the end users and the use of materials
  / tools / software / testing / feedback and the performance and / or quality of
  the outcome
- understood the things they learnt during the process and how these impacted on the overall development process
- expanded on information supplied in response to the initial parts of the overall task
- went into detail about the digital outcome and how they had created it, supported buy specific examples
- wrote about different examples when discussing what they could have done differently to improve the outcome, thereby building on their prior comments

so this was not just a repetition of the evaluation (or a contradiction of what was said in the evaluation).

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## Digital Technologies subject page

#### **Previous years' reports**

2020 (PDF, 160KB)

2019 (PDF, 103KB)

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