Course report 2025

Higher Computing Science

This report provides information on candidates' performance. Teachers, lecturers and assessors may find it useful when preparing candidates for future assessment. The report is intended to be constructive and informative, and to promote better understanding. You should read the report with the published assessment documents and marking instructions.

We compiled the statistics in this report before we completed the 2025 appeals process.

Grade boundary and statistical information

Statistical information: update on courses

Number of resulted entries in 2024: 3,746

Number of resulted entries in 2025: 3,962

Statistical information: performance of candidates

Distribution of course awards including minimum mark to achieve each grade

Course award	Number of candidates	Percentage	Cumulative percentage	Minimum mark required
A	1,668	42.1	42.1	82
B	729	18.4	60.5	71
C	593	15.0	75.5	60
D	408	10.3	85.8	49
No award	564	14.2	100%	Not applicable

We have not applied rounding to these statistics.

You can read the general commentary on grade boundaries in the appendix.

In this report:

- ‘most’ means greater than or equal to 70%
- ‘many’ means 50% to 69%
- ‘some’ means 25% to 49%
- ‘a few’ means less than 25%

You can find statistical reports on the statistics and information page of our website.

Section 1: comments on the assessment

In the question paper, 66% of candidates completed the ‘Database design and development’ section, and 34% completed the ‘Web design and development’ section. In the assignment, 66% of candidates completed the ‘Database design and development’ section, and 34% completed the ‘Web design and development’ section. This is a very slight increase in the number of candidates from the 2023–24 session choosing to complete the 'Database design and development’ section in both the question paper and the assignment.

Question paper

In general, feedback from markers, teachers and lecturers indicated that most questions performed as intended. However, analysis of statistical data demonstrated that both parts of question 9(e), which were intended to be a ‘A’-level questions, proved to be very challenging for candidates. This was supported by feedback from the marking team. As a result, we made an adjustment to grade boundaries at ‘A’ level.

Candidates appear to be improving at writing all forms of code, but questions requiring an extended response using command words ‘describe’ or ‘explain’ remain the most challenging.

Assignment

Feedback indicated that the assignment performed as expected. As expected, candidates received higher marks for practical tasks in the assignment that involved writing code than answers that required a written response.

We did not make any changes to grade boundaries in relation to the assignment.

Section 2: comments on candidate performance

Areas that candidates performed well in

Question paper

Software design and development, and computer systems

Question 1(a)(b)	Most candidates were proficient in identifying the largest number that could be represented from the given number. Many candidates could also identify the number of bits required to represent this.
Question 3	Most candidates gained 3 or 4 marks for the algorithm.
Question 4	Many candidates were able to explain the suitability of the agile methodology for the client.
Question 5(a)	Many candidates were able to correctly state that the control bus activates the read line.
Question 5(b)(i)	Most candidates could identify a suitable hardware improvement.
Question 5(b)(ii)	Most candidates were able to explain why the change increased processor performance.
Question 7(b)	Many candidates achieved 3 or 4 marks and successfully used their defined record structure and fields appropriately.
Question 8(c)	Most candidates gained 2 or 3 marks when converting to floating-point representation.

Database design and development

Question 10	Most candidates were able to correctly interpret the SQL code to give the expected output from a SQL statement with an aggregate function, WHERE clause and GROUP BY.
Question 11	Most candidates were able to correctly draw an entity-relationship diagram with correct cardinality from the information given.
Question 12(a)	Many candidates were able to design a suitable query using an appropriate aggregate function; however, the required grouping was missing at times.
Question 12(b)	While most candidates were able to create an UPDATE query to achieve 2 or 3 marks, some candidates found the syntax to increment a field value challenging.

Web design and development

Question 17(a)	Most candidates were able to draw an appropriate wireframe for the web page, including suitable validation and a ‘submit’ button. However, at times, the required elements were omitted.
Question 17(b)	Many candidates were able to identify the use of a descendant selector and describe its effect on the code given.
Question 18(a)	Most candidates were able to create a suitable navigational structure for the given scenario.
Question 18(c)(ii)	Many candidates were able to write a suitable grouping selector for the given CSS rule.

Areas that candidates found demanding

Question paper

Software design and development, and computer systems

Question 2	Many candidates were able to identify one benefit of a digital signature; however, some candidates gave benefits of a digital certificate.
Question 6(a)(b)	Many candidates were able to identify which was the vector image, but answered without using the appropriate technical terminology.
Question 9(e)(ii)	Many candidates described the code to change instead of describing the additional code to add, as required by the question.
Question 9(f)	Only a few candidates answered the question in terms of fitness for purpose, with many answers referring to robustness.

Database design and development

Question 12(c)	While some candidates were able to achieve 2 or 3 marks, candidate's answers were often incomplete and not specific enough for marks to be awarded — for example 'missing join', 'missing GROUP BY' or 'missing table'.
Question 13(b)	Many candidates were able to use either the calculation or the appropriate SUM function, but only some candidates were able to successfully combine them to provide the sum of the calculated value.
Question 13(d)	Only a few candidates were able to correctly identify the relationship between the existing entities and the new entity to

allow a many-to-many relationship to exist between the ‘Appointment’ and ’Part’ entities.

Web design and development

Question 18(c)(i) Some candidates were able to identify that the use of float was the issue. Candidates that did then found the use of clear: both challenging to identify.

Question 18(d)(i) Few candidates were able to identify that the increased margin would exceed the given width, and very few were able to explain that this would display the images differently from the given wireframe design.

Question 18(d)(ii) Few candidates were able to appropriately explain the issue related to resolution, with most candidates’ answers referring to screen width or size.

Question 18(e) Few candidates were able to appropriately explain the difference between the placement of block versus inline elements. Most candidates’ responses related to the placement of the <a> element in terms of being enclosed within the <p> element.

Areas that candidates performed well in or found demanding

Assignment

Software design and development

Question 1(a) Most candidates were able to successfully identify most of the missing functional requirements to achieve 2 or 3 marks. Some candidates missed the omitted input.

Question 1(b) Some candidates were not able to correctly identify the parameters that were being passed in or out of a sub-program by adding additional parameters to their data flow.

Question 1(c) The implementation of the program remains an area of strength for candidates. Most candidates implemented a modular program with appropriate sub-programs and standard algorithms. Most candidates followed the supplied program data flow and design. However, some candidates did not implement one count function that was then called twice.

Question 1(e) Some candidates were able to evaluate their own code in terms of efficiency and maintainability. However, candidates' answers were often generic and not related to the identified function, data structures or loops, or were of a National 5 standard and did not refer to Higher concepts.

Database design and development

Question 2(b) Many candidates were unable to explain the need for the additional entity. Only some candidates referred to the need to remove a many-to-many relationship.

Question 2(c)
Question 2(d) Most candidates were able to successfully implement the SQL statement(s) needed to produce the desired output. In question 2(c), some candidates did not include >= in their criteria and therefore were not awarded a mark for WHERE clause.

Question 2(e) Most candidates correctly identified both errors in the SQL statement and were able to correct these errors by adding the missing equi-join and correct calculation.

Question 2(f)(i) Most candidates correctly identified that the requirement to calculate the increase in value could not be met.

Question 2(f)(ii) While many candidates successfully identified the requirement that could not be met in 2(f)(i), only some candidates could explain the additional data that would be required and, crucially, refer to the database structure within their answer.

Web design and development

Question 3(a) Some candidates were able to create the additional functional requirements, but candidates' answers often lacked technical detail as they did not refer to the underlying code — for example, the use of a form element or JavaScript.

Question 3(b) Most candidates were able to edit the HTML code to match the given wireframe design. Some candidates did not implement a 10px margin between sections, with many adding 10px to both sides of the sections, resulting in a 20px gap.

Question 3(c) Most candidates successfully edited the HTML code to add JavaScript code to show the appropriate scorecard and hide those not required.

Question 3(e) Most candidates were able to review the website and identify three reasons why the website was not fit for purpose.

Section 3: preparing candidates for future assessment

Question paper

Candidates appear to have become much more familiar with the standard algorithms, and the coding and algorithm design questions were often well attempted. Centres should continue to encourage candidates to attempt large-tariff questions, as these are typically constructed to include 'C'-level marks as well as 'A' discriminator marks.

Candidates continue to find evaluation questions challenging, particularly when asked to discuss robustness at Higher level. Centres should ensure candidates appreciate the value of the evaluation stage of the development process, and that they are able to provide responses in the context of the question and to a standard that is appropriate for Higher.

Centres should also practise extended response questions that require a description or explanation for all topics of the course. Candidates should refer their answer to the context of the question and not just the operation of the lines of code, particularly when describing the function of code. Candidates should also be encouraged to provide complete descriptions when describing problems with or changes needed to code, along with the impact of any changes.

Candidates should also focus on improving accuracy of expression and using appropriate technical language, particularly when answering computer systems questions.

Assignment

While the practical implementation of code in the assignment remains an area of strength, candidates should always check their code carefully to ensure that they meet all the requirements of the task.

In software design and development, candidates should ensure that they refer to the given design and make sure that the code that they produce follows the refinements provided.

When writing SQL statements, candidates should ensure that their code will work for all values, not just the given set of data. For example, in question 2(c), the use of > gave candidates the given output, but this code would not meet the requirements of displaying all those valued ‘at least’ £300 above the average, should the data in the database change.

In web design and development, candidates should be encouraged to check their output carefully to ensure that not only does it produce an output, but that it produces the correct output to match the requirements given.

When analysing a problem, candidates are getting better at identifying the functional requirements. In database design and development, candidates have significantly improved their written answers with the inclusion of ‘a query to...’ to help structure their answers. Those candidates doing the web design option should be encouraged to always refer to underlying code such as form elements and JavaScript when writing functional requirements.

When identifying parameters required for sub-programs, candidates should ensure that they only pass the data that is required and do not include additional (unnecessary) parameters, to ensure that the code produced from this data flow is efficient.

Candidates continue to find evaluation to be an area that is significantly challenging. Candidates should ensure that they read the question carefully and refer to the aspects identified in the question. For example, in question 2(f)(ii), candidates were often able to identify the missing data that would need to be included, but did not refer to the database structure to identify where in the database this data should be added. Similarly, in software design and development, candidates should be given opportunities to practise writing evaluative statements on different aspects of their code in order to consolidate their evaluative skills and be encouraged to relate their evaluation to the question specified, rather than providing a generic response.

Once candidates have completed their assignment, teachers and lecturers should support candidates in ensuring that only pages containing candidate evidence that will be marked is submitted to SQA. Any pages containing only instructions must be discarded. Evidence should also be submitted in the order of the task.

Appendix: general commentary on grade boundaries

Our main aim when setting grade boundaries is to be fair to candidates across all subjects and levels and to maintain comparable standards across the years, even as arrangements evolve and change.

For most National Courses, we aim to set examinations and other external assessments and create marking instructions that allow:

- a competent candidate to score a minimum of 50% of the available marks (the notional grade C boundary)
- a well-prepared, very competent candidate to score at least 70% of the available marks (the notional grade A boundary)

It is very challenging to get the standard on target every year, in every subject, at every level. Therefore, we hold a grade boundary meeting for each course to bring together all the information available (statistical and qualitative) and to make final decisions on grade boundaries based on this information. Members of our Executive Management Team normally chair these meetings.

Principal assessors utilise their subject expertise to evaluate the performance of the assessment and propose suitable grade boundaries based on the full range of evidence. We can adjust the grade boundaries as a result of the discussion at these meetings. This allows the pass rate to be unaffected in circumstances where there is evidence that the question paper or other assessment has been more, or less, difficult than usual.

- The grade boundaries can be adjusted downwards if there is evidence that the question paper or other assessment has been more difficult than usual.
- The grade boundaries can be adjusted upwards if there is evidence that the question paper or other assessment has been less difficult than usual.
- Where levels of difficulty are comparable to previous years, similar grade boundaries are maintained.

Every year, we evaluate the performance of our assessments in a fair way, while ensuring standards are maintained so that our qualifications remain credible. To do this, we measure evidence of candidates' knowledge and skills against the national standard.

For full details of the approach, please refer to the Awarding and Grading for National Courses Policy.