Singapore Informatics League 2025

Post-Contest Report

December 2025

Contents

1 Introduction

The Singapore Informatics League (SIL) is a fast-paced, team-based contest designed to promote computer science education among students of diverse backgrounds and experience levels. A key objective of SIL is to serve as a gentle introduction to competitive programming, particularly for students with little to no prior experience. The inaugural edition of SIL was held on 29 November 2025, following more than a year of planning and development.

SIL 2025 was supported by the Centre for Nurturing Computing Excellence (CeNCE), which shares our commitment to fostering computing excellence among both pre-university and university-level students.

This report presents key contest statistics and outlines the organising team's considerations in addressing issues that arose during and after the contest.

2 Participant Demographics

A total of 150 teams registered for SIL 2025, comprising 620 participants from 56 different schools, reflecting a broad range of educational backgrounds. These included 6 international schools, 4 polytechnics, and 1 Institute of Technical Education (ITE) college. 29.68% of the participants identified as female, non-binary, or preferred not to disclose their gender.

Given SIL's objective of reaching disproportionately underrepresented groups such as students from schools with less developed competitive programming training programs and non-male students, these figures are encouraging and suggest meaningful interest in SIL among these communities.

In terms of prior experience, 69.35% of participants reported no previous participation in the National Olympiad in Informatics. 50.00% indicated that they did not have any formal computing qualification, while 45.81% self-identified at skill level 1 (Beginner). These statistics align with SIL's goal of serving as an accessible entry point to competitive programming.

A detailed breakdown of participant demographics is provided in Appendix A.

3 Batch Tasks Analysis

SIL 2025 featured a total of 30 batch tasks, each assigned a difficulty "level" from 1 to 4. This was intended to provide an indication of both task difficulty and the breadth of content knowledge required, in accordance with the published Syllabus. There were 8, 9, 9, and 4
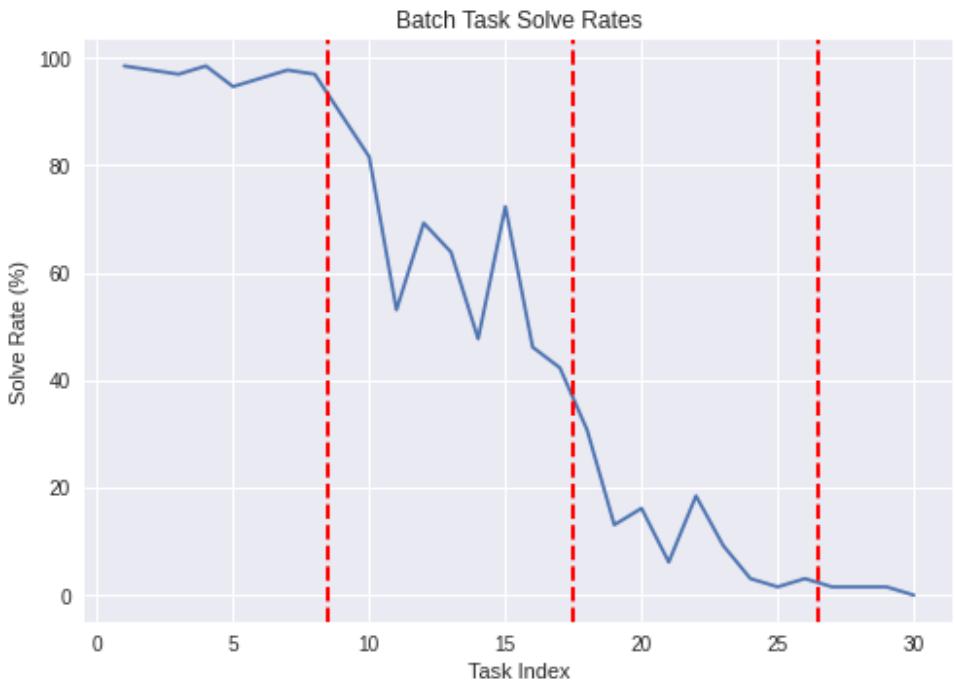
Figure 1: Line plot of the solve rates for all the batch tasks. Red dashed lines partition the difficulty levels.

tasks in each level respectively. All tasks used in the contest were original and were created specifically for SIL 2025. The tasks, and their solutions, have been published.

42 task proposals were submitted by 7 distinct authors over several months. These proposals were reviewed by the Scientific Committee, which evaluated them for pedagogical value and overall quality, while also ensuring a balanced distribution of topics and difficulty levels in the final task set.

From an analysis of submission statistics, we observe remarkably flat plateaus in full solve rate for the first eight tasks, with all exceeding 90%. This indicates that the first few tasks of the contest were well-tuned to the skill level of the vast majority of teams. In contrast, we further observe that the last 6 tasks were effectively irrelevant for the overwhelming majority of teams. Solve rates for these tasks hovered between 0% and 1.5%, suggesting that the upper-end difficulty was unnecessarily clustered. Figure 1 plots the solve rate (as a percentage of total teams) against the task index.

A detailed breakdown of submission statistics is available in Appendix B.

4 Optimisation Task Analysis

The optimisation task featured a robot navigating a grid, with participants tasked to strategically place walls to maximise the number of distinct cells robot visits. In total, 80 teams (61.54% of all teams) attempted the task.[1]

4.1 Scoring Calculation

Each subtask carried a maximum of 15 points. Let x denote the number of cells visited by a team's best construction, and let y denote the maximum number of cells visited among all submitted constructions. The team's normalised score x' for that subtask is defined as

$$x' = 15 \left(\frac{x}{y} \right)^2,$$

which rewards teams for approaching the best-performing solution while encouraging competition among participants. The normalised scores across the three subtasks are then summed to obtain the team's total score for the optimisation task.

See Appendix C for a graphical summary of the score distributions for the optimisation task.

5 Issues Reported During Contest

5.1 Redirect Bug

At 09:12, the organising team was informed of an issue in which, when one team member skipped a task, other members of the same team were redirected to a different task. In some cases, this led participants to submit solutions to the wrong task, resulting in penalties for incorrect submissions.

The issue was resolved by 09:55. Affected teams were allowed to submit appeals requesting compensation for the penalties. Of the 19 teams that submitted appeals, 16 had their appeals accepted or partially accepted following a thorough verification process based on submission logs.

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[1]This figure excludes disqualified teams.

5.2 Participant-Side Technical Issues

During the contest, several participants reported difficulties related to handling large input files, including being unable to correctly read the provided input into their programs. Additionally, some participants raised concerns about slow program execution or insufficient memory on their workstations when running their solutions.

These issues fall within the scope of participant responsibility, and the organising team was therefore unable to provide technical assistance during the contest or accept appeals on these grounds. All contest tasks are designed with the guarantee that a correct solution exists that runs efficiently within reasonable time and memory limits (15 seconds, 1024 MB) on standard hardware. Consequently, appeals based on perceived unfairness arising from differences in participant workstation performance cannot be accepted.

However, we acknowledge that such challenges can significantly harm the contest experience for participants who are unfamiliar with programming contests. In future editions of SIL, we plan to provide clearer pre-contest guidance on how to resolve common technical difficulties, including recommended techniques for handling large inputs, and executing resource-intensive programs.

6 Post-Contest Verification Review

After conducting a review of participants' submissions and contest activity, we identified 11 teams that potentially violated the rules by using Generative Artificial Intelligence tools or seeking outside assistance beyond their registered team.

Out of these 11 teams:

- 3 teams admitted to cheating when prompted.

- 6 teams did not respond to our request for clarification, which we considered an implicit admission of wrongdoing.

- 2 teams appealed but failed to provide sufficient evidence to justify their actions.

As a result, all 11 teams were disqualified from the contest.

This investigation process was lengthy, required much effort from the organising team, and delayed the release of the results, but it was essential to maintain the integrity of the contest. Upholding these standards of fairness is crucial not only for SIL 2025, but for future editions as well.
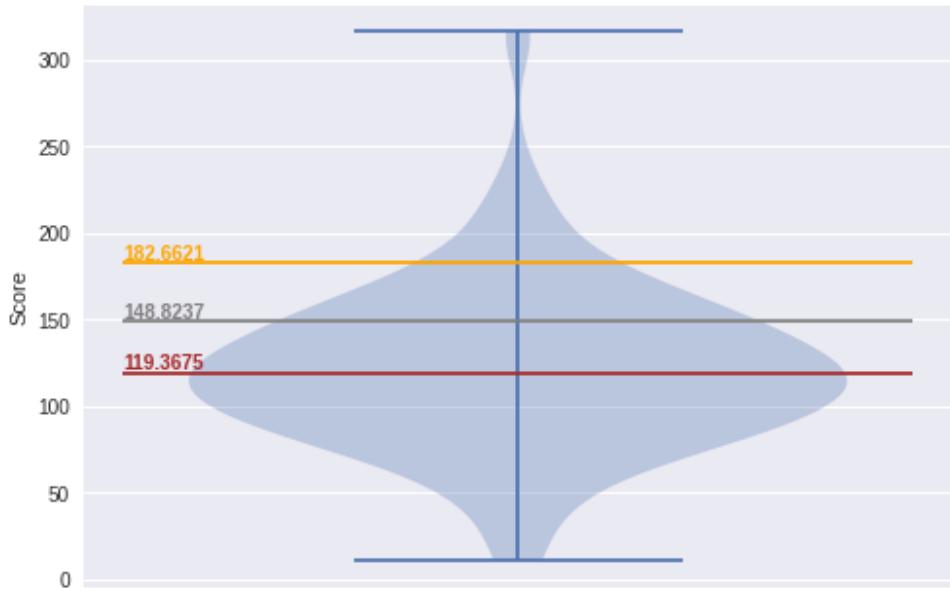
Figure 2: Violin plot of the score distribution, with award boundaries labelled.

We would like to remind all participants that SIL is designed to be a relaxed, beginner-friendly introduction to computer science competitions. The goal of the contest is for participants to enjoy learning, challenge themselves, and collaborate together, not to win at all costs.

7 Award Boundary Calculations

Excluding 9 teams that did not submit any solutions and 11 teams that were disqualified for dishonest behaviour, a total of $150 - 9 - 11 = 130$ teams remain eligible for awards.

Each team's total score was computed as the sum of its scores from the batch tasks and the optimisation task. Teams were then ranked in descending order of total score.

In accordance with the contest rules, the Gold Award was presented to the top $\left\lceil \frac{130}{12} \right\rceil = 11$ teams; at least the Silver Award to the top $\left\lceil \frac{130}{4} \right\rceil = 33$ teams; and at least the Bronze Award to the top $\left\lceil \frac{130}{2} \right\rceil = 65$ teams.

These calculations are stated explicitly in our contest rules and follow the latest International Olympiad in Informatics (IOI) regulations (except honourable mention).

Figure 2 shows the distribution of total scores. The full scoreboard is also publicly available.

8 Post-Contest Survey Results

Shortly after the contest concluded, participants were invited to complete a feedback survey. We are grateful to the 108 participants who took the time to respond; their feedback will help guide decisions for future editions of SIL.

The survey results reflect strong participant engagement and educational impact. The problems were well-received, with 88.9% of participants providing a rating of 4 or 5 out of 5. 71.3% of respondents found the contest very useful for learning more about computer science and programming.

78.7% of participants felt there were enough beginner-friendly problems to allow them to contribute meaningfully, while 66.7% felt the difficulty increased at a reasonable pace. Correspondingly, 71.3% of participants rated the event as a suitable introduction to computer science competitions. While we are encouraged to know that most participants consider SIL to have met its objective of being beginner-friendly, more has to be done to provide a more educational and suitably challenging experience for beginners.

The contest platform was found easy to use by 79.7% of respondents, with 70.4% describing the overall user experience as smooth. Several participants explicitly commended the Technical Committee for designing an aesthetically pleasing and responsive platform. Additionally, 68.5% of participants agreed that the 4-hour contest duration was appropriate.

However, the results also show two main areas for improvement. Firstly, most teams did not sufficiently engage with the optimisation task, which received a predominantly neutral rating of 3 from 40.7% of participants. Secondly, participants struggled with the transition between difficulty levels, with only 13.0% rating a 5 for the overall accessibility. The scientific committee will prioritise enhancing the engagement and relevance of the optimisation task to the contest experience, and ensure a gentler difficulty curve for future task sets.

Aggregate survey responses may be found in Appendix D.

9 Conclusion

We are encouraged by the smooth execution and heartened by the positive feedback received for the inaugural edition of the SIL. The organising team is committed to identifying areas for improvement and is dedicated to creating an even more educational, enjoyable, and collaborative contest experience in the future.

The primary objective of the SIL is to foster computer science education among pre-tertiary students. With that in mind, we strongly encourage participants of SIL 2025, especially begin-

ners, to continue learning about competitive programming through free online resources such as CP Algorithms and USACO Guide. Regular free online contests are hosted on platforms like Codeforces and AtCoder, for participants who wish to dive deeper into the world of competitive programming. We also highly recommend that interested students work towards the National Olympiad in Informatics (NOI), Singapore's premier competitive programming contest, held annually in March.

Additionally, we warmly welcome participants (who will have graduated from their pre-tertiary institution) to get involved in organising future editions of SIL. Whether you have ideas for task proposals, are interested in developing or maintaining SIL's complex technical infrastructure, or can contribute in areas such as data analytics, graphic design, publicity, or other relevant fields, we would be glad to hear from you. Interested individuals may fill in this recruitment form, or contact the organising team via email at `contact@sginfoleague.org` or through our Discord server.

A Participant Demographics

Category	Count	Percentage (%)
Education Level		
Year 1 / Sec 1	43	6.94%
Year 2 / Sec 2	77	12.42%
Year 3 / Sec 3	98	15.81%
Year 4 / Sec 4 / Sec 5	85	13.71%
Year 5 / JC 1 / MI 1 / Poly 1 / ITE 1	219	35.32%
Year 6 / JC 2 / MI 2 / Poly 2 / ITE 2	92	14.84%
Poly 3 / MI 3 / ITE 3	6	0.97%
Gender		
Male	436	70.32%
Female	161	25.97%
Non-binary	3	0.48%
Prefer not to say	20	3.23%
NOI Experience		
None	430	69.35%
Certificate of Participation	93	15.00%
Bronze Medal	36	5.81%
Silver Medal	37	5.97%
Gold Medal	24	3.87%
Highest Computing Qualification		
None	310	50.00%
O-Level Computing	124	20.00%
Polytechnic	30	4.84%
H2 Computing	156	25.16%
Self-assigned Skill Level		
1 (Beginner)	284	45.81%
2	164	26.45%
3	101	16.29%
4	39	6.29%
5 (Veteran)	27	4.35%

Table 1: Breakdown of participant demographics and prior experience. $n = 620$ participants.

B Batch Task Submission Statistics

Table 2: Individual batch task submission statistics ($n = 130$ teams, after disqualifications). Avg. WA (Solved): Average number of Wrong Answers for teams that solved the subtask. WA % (All): Percentage of total submissions that were WAs.

Task / Subtask	Avg. WA (Solved)	WA % (All)	Solves	Solve %
Task 1: Broken Key (Full Solves: 128 | **98.46%**)				
Subtask 1	0.55	35.35%	128	98.46%
Subtask 2	0.12	10.49%	128	98.46%
Subtask 3	0.30	22.89%	128	98.46%
Task 2: Cats and Parking (Full Solves: 127 | **97.69%**)				
Subtask 1	0.13	11.11%	128	98.46%
Subtask 2	0.35	25.73%	127	97.69%
Subtask 3	0.19	15.89%	127	97.69%
Task 3: Distribution (Full Solves: 126 | **96.92%**)				
Subtask 1	0.20	16.99%	127	97.69%
Subtask 2	0.24	19.23%	126	96.92%
Subtask 3	0.44	30.39%	126	96.92%
Task 4: Duck Fight (Full Solves: 128 | **98.46%**)				
Subtask 1	0.22	17.83%	129	99.23%
Subtask 2	0.10	9.15%	129	99.23%
Subtask 3	0.16	15.79%	128	98.46%
Task 5: Bench (Full Solves: 123 | **94.62%**)				
Subtask 1	0.45	30.98%	127	97.69%
Subtask 2	0.27	21.12%	127	97.69%
Subtask 3	1.02	53.76%	123	94.62%
Task 6: Schedule (Full Solves: 125 | **96.15%**)				
Subtask 1	0.27	21.12%	127	97.69%
Subtask 2	0.13	11.81%	127	97.69%
Subtask 3	0.44	32.43%	125	96.15%

Table 2 – Continued from previous page

Task / Subtask	Avg. WA (Solved)	WA % (All)	Solves	Solve %
Task 7: Typing Test (Full Solves: 127 | **97.69%**)				
Subtask 1	0.23	18.59%	127	97.69%
Subtask 2	0.65	39.23%	127	97.69%
Subtask 3	0.20	16.45%	127	97.69%
Task 8: Ducks, Rabbits and Weirdos (Full Solves: 126 | **96.92%**)				
Subtask 1	0.20	17.65%	126	96.92%
Subtask 2	0.13	11.27%	126	96.92%
Subtask 3	0.37	26.74%	126	96.92%
Task 9: AANDNANDT (Full Solves: 116 | **89.23%**)				
Subtask 1	0.44	30.73%	124	95.38%
Subtask 2	0.72	41.98%	123	94.62%
Subtask 3	0.19	31.76%	116	89.23%
Task 10: 90 (Full Solves: 106 | **81.54%**)				
Subtask 1	0.37	33.72%	114	87.69%
Subtask 2	0.33	27.39%	114	87.69%
Subtask 3	0.41	37.28%	106	81.54%
Task 11: Fisherman (Full Solves: 69 | **53.08%**)				
Subtask 1	0.35	26.45%	114	87.69%
Subtask 2	1.94	78.79%	102	78.46%
Subtask 3	0.32	44.80%	69	53.08%
Task 12: Pringles Sort (Full Solves: 90 | **69.23%**)				
Subtask 1	0.64	39.02%	125	96.15%
Subtask 2	0.38	50.00%	105	80.77%
Subtask 3	0.21	23.53%	91	70.00%
Task 13: Bamboo (Full Solves: 83 | **63.85%**)				
Subtask 1	0.53	35.71%	117	90.00%
Subtask 2	0.38	42.26%	97	74.62%
Subtask 3	0.11	20.19%	83	63.85%

Table 2 – Continued from previous page

Task / Subtask	Avg. WA (Solved)	WA % (All)	Solves	Solve %
Task 14: E-sign (Full Solves: 62 | **47.69%**)				
Subtask 1	1.26	56.37%	113	86.92%
Subtask 2	0.08	27.19%	83	63.85%
Subtask 3	0.29	35.42%	62	47.69%
Task 15: Investment (Full Solves: 94 | **72.31%**)				
Subtask 1	0.70	41.27%	111	85.38%
Subtask 2	5.18	84.88%	98	75.38%
Subtask 3	2.65	73.68%	95	73.08%
Task 16: Bamboo 2 (Full Solves: 60 | **46.15%**)				
Subtask 1	0.72	50.00%	101	77.69%
Subtask 2	0.31	34.62%	85	65.38%
Subtask 3	0.03	14.29%	60	46.15%
Task 17: Compressor (Full Solves: 55 | **42.31%**)				
Subtask 1	4.78	87.99%	89	68.46%
Subtask 2	6.23	89.75%	62	47.69%
Subtask 3	12.44	93.16%	55	42.31%
Task 18: Jokers (Full Solves: 40 | **30.77%**)				
Subtask 1	0.67	75.84%	43	33.08%
Subtask 2	0.20	27.42%	45	34.62%
Subtask 3	0.05	12.77%	41	31.54%
Task 19: Musical Chairs (Full Solves: 17 | **13.08%**)				
Subtask 1	0.12	46.91%	43	33.08%
Subtask 2	0.45	74.12%	22	16.92%
Subtask 3	0.29	61.36%	17	13.08%
Task 20: Volcano (Full Solves: 21 | **16.15%**)				
Subtask 1	0.98	52.08%	46	35.38%
Subtask 2	2.40	88.81%	30	23.08%
Subtask 3	0.10	44.74%	21	16.15%

Table 2 – Continued from previous page

Task / Subtask	Avg. WA (Solved)	WA % (All)	Solves	Solve %
Task 21: Card Draw (Full Solves: 8 | **6.15%**)				
Subtask 1	1.70	85.59%	33	25.38%
Subtask 2	0.47	33.33%	30	23.08%
Subtask 3	0.00	57.89%	8	6.15%
Task 22: Cup Stacking (Full Solves: 24 | **18.46%**)				
Subtask 1	1.65	87.80%	31	23.85%
Subtask 2	0.16	30.56%	25	19.23%
Subtask 3	0.00	4.00%	24	18.46%
Task 23: Mildly Angry Ducks (Full Solves: 12 | **9.23%**)				
Subtask 1	0.89	90.10%	19	14.62%
Subtask 2	0.00	12.50%	14	10.77%
Subtask 3	0.08	20.00%	12	9.23%
Task 24: Tick Tock (Full Solves: 4 | **3.08%**)				
Subtask 1	2.50	94.97%	8	6.15%
Subtask 2	0.17	25.00%	6	4.62%
Subtask 3	0.00	50.00%	4	3.08%
Task 25: Mahjong (Full Solves: 2 | **1.54%**)				
Subtask 1	0.00	83.72%	7	5.38%
Subtask 2	0.00	84.62%	2	1.54%
Subtask 3	0.00	71.43%	2	1.54%
Task 26: Slimes (Full Solves: 4 | **3.08%**)				
Subtask 1	0.14	72.00%	7	5.38%
Subtask 2	0.00	40.00%	6	4.62%
Subtask 3	0.00	20.00%	4	3.08%
Task 27: Bad Addition (Full Solves: 2 | **1.54%**)				
Subtask 1	1.78	77.50%	9	6.92%
Subtask 2	0.00	33.33%	2	1.54%
Subtask 3	0.00	0.00%	2	1.54%

Table 2 – Continued from previous page

Task / Subtask	Avg. WA (Solved)	WA % (All)	Solves	Solve %
Task 28: Company Management (Full Solves: 2 | **1.54%**)				
Subtask 1	0.00	0.00%	2	1.54%
Subtask 2	0.00	0.00%	2	1.54%
Subtask 3	0.00	0.00%	2	1.54%
Task 29: Mixing Sauces (Full Solves: 2 | **1.54%**)				
Subtask 1	0.50	71.43%	2	1.54%
Subtask 2	0.00	0.00%	2	1.54%
Subtask 3	1.50	60.00%	2	1.54%
Task 30: Mountain Range (Full Solves: 0 | **0.00%**)				
Subtask 1	0.00	97.50%	1	0.77%
Subtask 2	0.00	0.00%	1	0.77%
Subtask 3	N/A	N/A	0	0.00%

C Optimisation Task Score Distributions
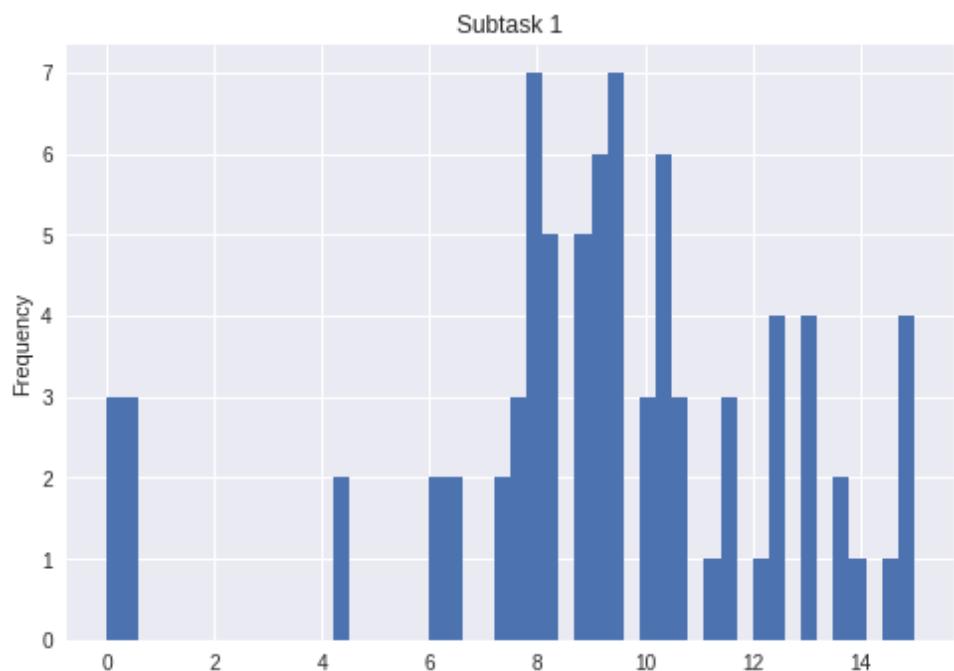
Subtask 2
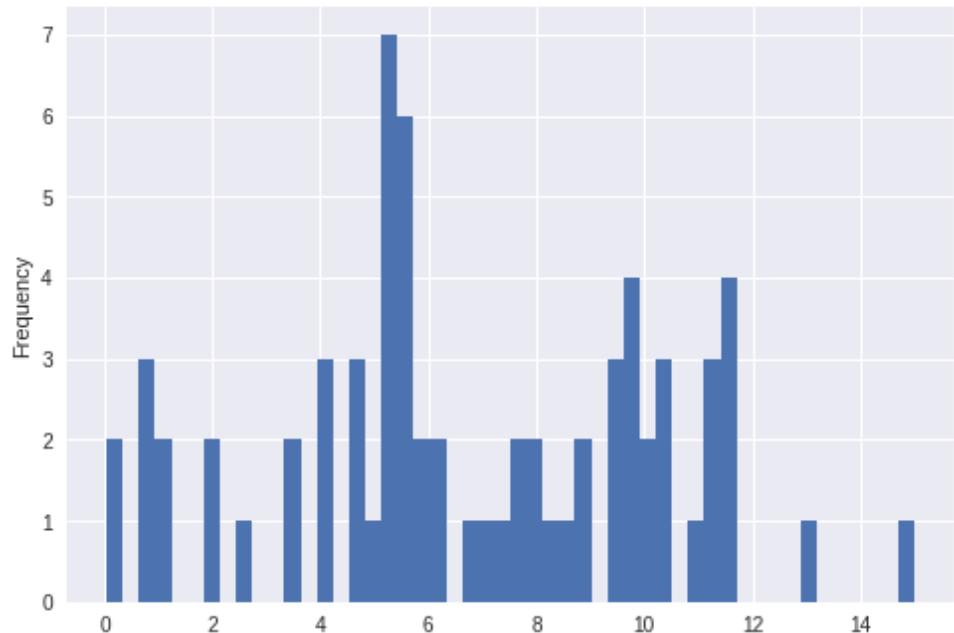
Subtask 3
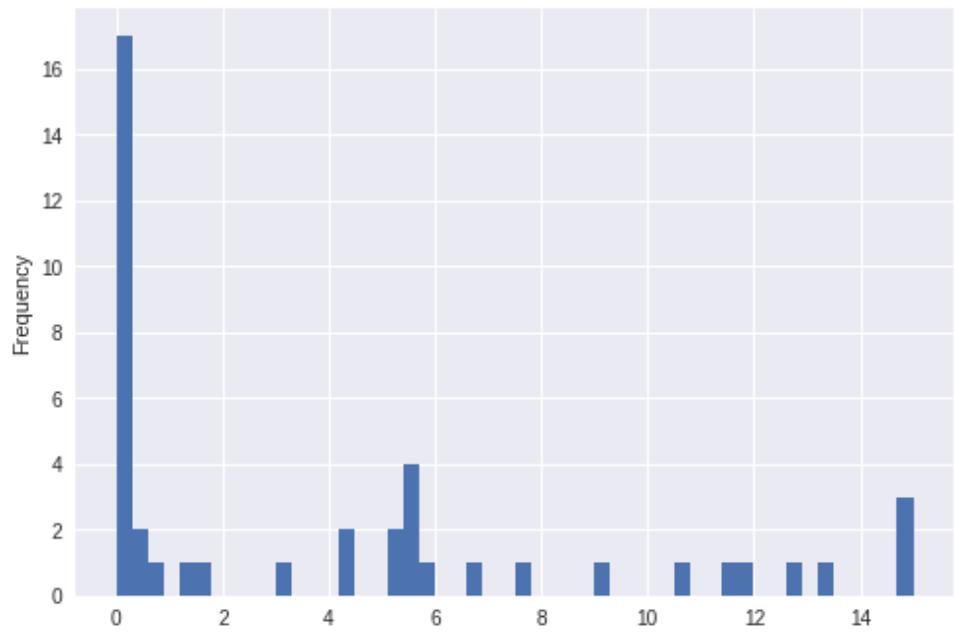
D Feedback Form Aggregate Responses

Question	1 (Low)	2	3	4	5 (High)
Problem Interest	0.0%	1.9%	9.3%	55.6%	33.3%
Accessibility (Difficulty)	0.9%	2.8%	39.8%	43.5%	13.0%
Optimisation Engagement	3.7%	11.1%	40.7%	21.3%	23.1%
Platform Ease of Use	0.9%	5.6%	13.9%	45.4%	34.3%
User Experience (Smoothness)	1.9%	10.2%	17.6%	38.0%	32.4%
CS Contest Introduction Value	2.8%	7.4%	18.5%	39.8%	31.5%
CS/Programming Learning Value	1.9%	8.3%	18.5%	42.6%	28.7%

Table 3: Percentage distribution of participant ratings across contest metrics.

Question	Response Option	Percentage
Reasonable Difficulty Pace	Yes / No	66.7% / 33.3%
Enough Beginner Problems	Yes / No	78.7% / 21.3%
Contest Duration (4 Hours)	Just Right	68.5%
	Too Short	28.7%
	Too Long	2.8%

Table 4: Binary and categorical responses regarding contest structure.