

Team 9A | Dailies

[amiir](#) 1 July 18, 2023, 1:50pm

180723 Team 9A Dailies

We have gotten into our project groups to know each other better for better team collaboration and coordination. We also aligned our objectives and goals together with the other team partaking in the same project, and learned how to craft suitable questions to ask the project partners using AI prompts. In addition, we gained insightful knowledge regarding mental models and how it affects our thought process when given a project and coming up of queries regarding it. To ensure team cohesiveness, we learned the importance of creating a team contract.

1 Like

[nazirahmed](#) 2 July 18, 2023, 1:51pm

I am writing this reply to test the website out.

2 Likes

[OliverChoy](#) 3 July 18, 2023, 2:15pm

I learnt a lot with regards to mental models, team contract and how to pose a good question to the customer today, as well as, getting to know my team better

[fraecesah](#) 4 July 18, 2023, 2:27pm

We will need to get in touch with Prof Jeremy's teaching assistants since he will be on break.

[amiir](#) 5 July 19, 2023, 2:42pm

190723 Team 9A Dailies

We began the day by meeting with our project partners today and discussed the questions that we had about the project with them. We managed to gain useful insights and clarifications regarding the project. In the afternoon, we learned about feedback, pitching and practiced requirement gathering. Following that, we continued our discussion with Team 9B and consulted our Teaching Assistant for clarifications related to our project and we managed to come up with a few feasible ideas (creating multiple choice questions for the students with code snippets as answers to let the students choose the answer, and the robot will move accordingly etc.) that we are considering to use in our design implementation.

[amiir](#) 6 July 20, 2023, 4:15pm

200723 Team 9A Dailies

We continued our ideation process for today to come up with activities for students to learn the basics of programming and computer science via Curio. A prototype is in creation (currently using python) where there is a sample mcq question displayed on the web regarding programming and when the student selects the correct answer, the robot will move forward. One computer science topic that we may want to focus on moving forward would be data structures, and we are in the process of thinking how to represent these via the robot.

[jgrizou](#) 7 July 20, 2023, 11:11pm

amiir:

A prototype is in creation (currently using python) where there is a sample mcq question displayed on the web regarding programming and when the student selects the correct answer, the robot will move forward

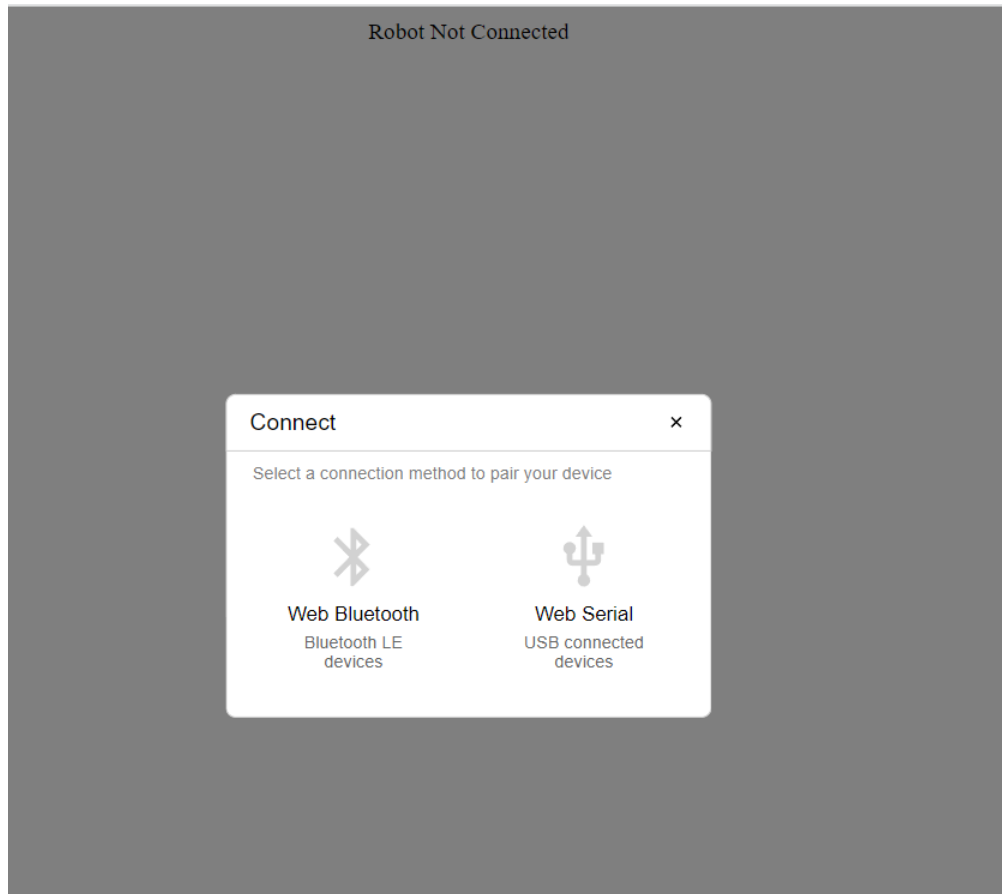
Why don't you show us this prototype here? Just a few screenshot, you might get useful feedback

[amiir](#) 8 July 21, 2023, 4:11pm

Team 9A Dailies 210723

Apart from the Prototyping lecture in the morning, our team proceeded to further develop and refine the idea we came up with on Wednesday based on Lewis's (PGR) comments on our initial idea. We managed to establish a bluetooth connection from a laptop to the robot to control its movements via code. One of the refinements we made is to utilise Multiple Choice Questions (MCQs) using code snippets for the lecture quizzes to reinforce the students' knowledge of the lecture concepts instead of using it for practical tutorials as the students might complete it via the process of elimination which would defeat the purpose of learning. (Prototype can be seen in weekly pitch 1 video)

Snippets of prototype:



1. What is the purpose of the `np.random.randint` function?

TO GENERATE A RANDOM INTEGER.

TO RETURN AN ARRAY OF SPECIFIED SHAPE FILLED WITH RANDOM INTEGERS FROM LOW (INCLUSIVE) TO HIGH (EXCLUSIVE).

TO RETURN A RANDOM FLOAT.

TO RETURN AN ARRAY OF SPECIFIED SHAPE FILLED WITH RANDOM FLOATS.

(robot moves accordingly based on selected answer)

An idea that we have moving forward would be to let the students partake in a racing competition involving 2 Curio robots and the students will have to answer a series of programming questions. The robot will move forward if they get the correct answer and move backwards if they input the wrong answer. Essentially there will be an end goal and the robot which is closer to the goal or finishing line will be the victor.

[amiir](#) 9 July 24, 2023, 4:42pm

240723 Team 9A Dailies

We continued with development and ideation of the project. Improvements have been made to the UI and we have added a quiz completion once the student has answered 10 questions correctly. We have also added 2 prototype pages: landing page for students to log in which will redirect them to a home screen to select which quiz to take part in.

1. How to multiply all elements of a numpy array 'arr' by 3?

3 * ARR

ARR * 3

ARR X 3

3 X ARR

OIP Team 9A

Username:



Password:



Login

Please select a quiz to assess your knowledge of the topic!

[Quiz 1](#)[Quiz 2](#)[Quiz 3](#)[Quiz 4](#)[Quiz 5](#)[Summative Quiz](#)

Based on our previous dailie regarding the racing competition idea, our robot can currently move straight or back based on the answers provided. We have some more ideas to add on and refine the design.

- The students will answer quiz questions to control the robot's movements in a maze (instead of only moving straight, students will have the option to choose to move straight, back, or turn left and right)
- For collaboration, multiple students can be involved in solving the questions and also figuring out which path the robot should take
- Discussions can be held after the quiz is complete to go through what went right, wrong etc.

[amiir](#) 10 July 25, 2023, 3:00pm

250723 Team 9A Dailies

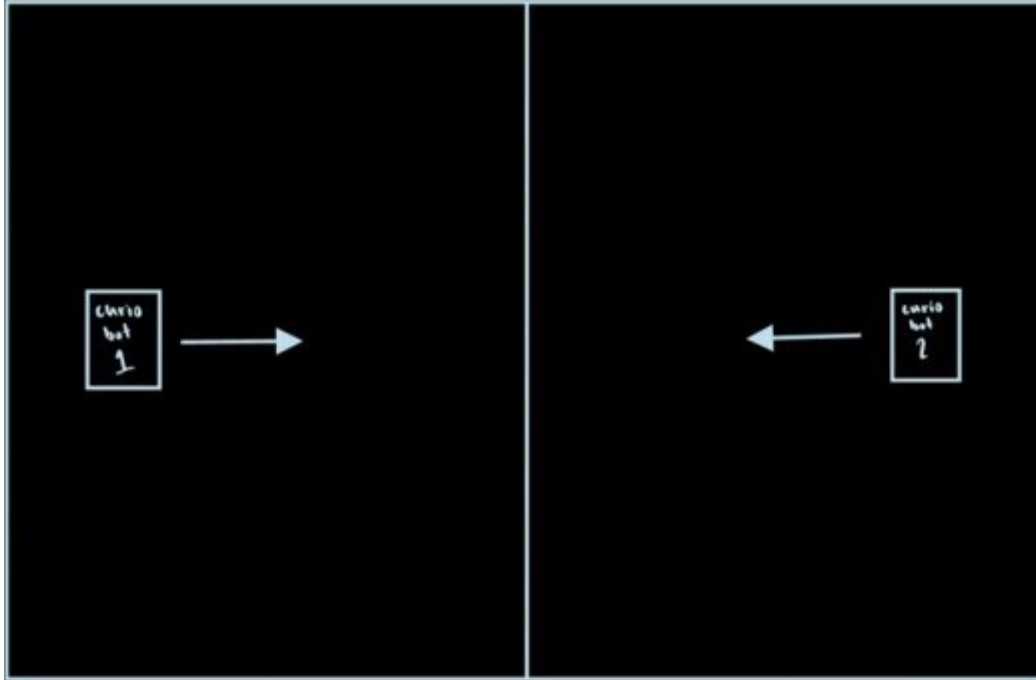
We spent the day brainstorming more ideas and evaluated their pros and cons. After much discussion we decided on 2 ideas to focus on testing the students' knowledge using Multiple Choice Questions (MCQs). We chose MCQs as our preferred assessment technique after carefully considering its usefulness in effectively evaluating students' knowledge, application abilities, and eliminating misunderstandings. The flexible nature of MCQs allows us to cover a wide range of topics, from simple memory questions (e.g., How many bits are in a byte?) to ones requiring higher-order thinking abilities.

Idea 1:

Collaborative race in teams of 3, robot moves forward when correct answer is selected and does not move when wrong answer is selected. To ensure that the students do not blindly select any answer, if they select the wrong answer they will be disabled from selecting another option for 5 seconds. Checkpoints will be added in the race for the teams to discuss their answers.

Idea 2:

Battle idea where 2 teams of students go against each other, answering MCQ questions as fast as they can. When they get the correct answer, the robot moves forward and does not move when the wrong answer is submitted. There will be a middle point as reference and whichever robot travels further or passes the middle line first will be the victor.



We plan to show and demo these ideas to Lewis tomorrow for him to test and give us feedback on it.

[amiir](#) 11 July 26, 2023, 3:46pm

260723 Team 9A Dailies

We had a meeting with Lewis where we discussed ideas mentioned in the previous dailie, and decided to focus on the battle concept moving forward. This is because the battle idea takes up less space than the race idea. (Battle: 2 robots moving towards each other; Race: 2 robots moving towards the same direction in a certain area thus requiring more space).

To further improve the design, we were given suggestions to include the option for the 2 teams to receive the same set of questions during the battle and also test the students based on content from multiple weeks of their lesson schedule (so the quiz will contain multiple topics instead of only 1). Other suggestions are to consider placing obstacles in the playing area to involve left and right movements of the robot.

In the upcoming days, we will continue with development of the robot activity and the website.

[amiir](#) 12 July 27, 2023, 4:43pm

270723 Team 9A Dailies

We continued with development of the robot and the website. Since the battle mode will be the idea that our team will be choosing as the final design, we are in the progress of coding the interface of the quiz which the students will see, and also testing it out on 2 robots and devices.

During testing, we plan to put ourselves in the shoes of the students that will be participating in our activity to pinpoint any areas of improvement that we may not be able to identify before development and testing is in progress.

[clareth](#) 13 July 28, 2023, 11:09am

amiir:

During testing, we plan to put ourselves in the shoes of the students that will be participating in our activity to pinpoint any areas of improvement that we may not be able to identify before development and testing is in progress.

Exactly this is a good idea and sometimes it could be also good to think like you are the lecturer or other stakeholders of the classroom.

1 Like

[amiir](#) 14 July 28, 2023, 2:38pm

280723 Team 9A Dailies

We tested out the battle idea by having 2 group members act as the students taking the quiz. We found out that when an incorrect answer was provided, the delay of 5 seconds which we originally set felt quite long and thus, we might decrease the delay to 3 seconds for a better user experience.



(Video can be seen in weekly pitch 2)

After consulting Prof Jonathan regarding the poster, our group realised that we deviated slightly from the intended path. Our initial idea for the poster was to have a Problem Statement, Methodology, Design Process and Future Works section, however, Prof Jonathan guided us and mentioned that the exhibition was meant for us to showcase our final product and with that advice we made the necessary changes to our poster design. As such, our updated design will include the following sections: Problem Statement and Constraints and Final Design Solution. We will also include pictures to document and showcase the final product and users using our solution to visualise how our product is like.

2 Likes

[amiir](#) 15 July 31, 2023, 4:30pm

310723 Team 9A Dailies

Today, the team continued with development of the website and crafting of the poster for exhibition day. We also continued with programming the Curio robots and

fixing any bugs that pop up such as the same question being displayed twice in a row etc, and taking what we have learnt from the test run we did on 28th July to improve the design. (decrease delay and so on)

Tomorrow, we plan to have other groups to test out our design to receive feedback and see what we can improve on further.

1 Like

[clareth](#) 16 August 1, 2023, 1:27pm

Do you have any latest images, poster drafts or website templates so far? It would be nice to see the poster especially before the deadline 😊

[amiir](#) 17 August 1, 2023, 2:55pm

010823 Team 9A Dailies

Today, we continued with crafting the poster and development of our website to document the whole project. Here are some snippets of the poster and website:

Poster

CURIOSPHERE: WHERE EDUCATION COMES ALIVE!

TEAM 9A



Abdullah, Amir, Fathima, Kai Wen, Nazir, Oliver

PROBLEM STATEMENT

To design open-ended and engaging activities that aligns with the desired learning outcomes of the summer widening school curriculum

CONSTRAINTS

- Time required to get familiarized with Curio
- Space constraints
- Brainstorming engaging activities for students with and without Computing Science background



PRODUCT

ON YOUR MARKS, ROBOTS, GO!

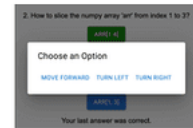


- Navigate the race using Curio
- When a student answers correctly, they are offered options to advance the robot forward or rotate it either to the left or right

WEB APPLICATION



MCQs to test students' Computing Science knowledge



Robot movement options

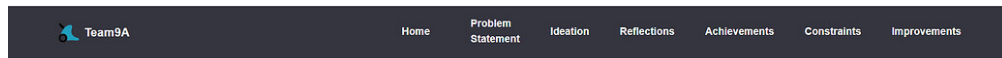
ROBO RUMBLE: TEAM SHOWDOWN



- 2 teams against each other answering MCQs
- Performance in MCQs determines robot movement
- First team to cross the middle line is the victor

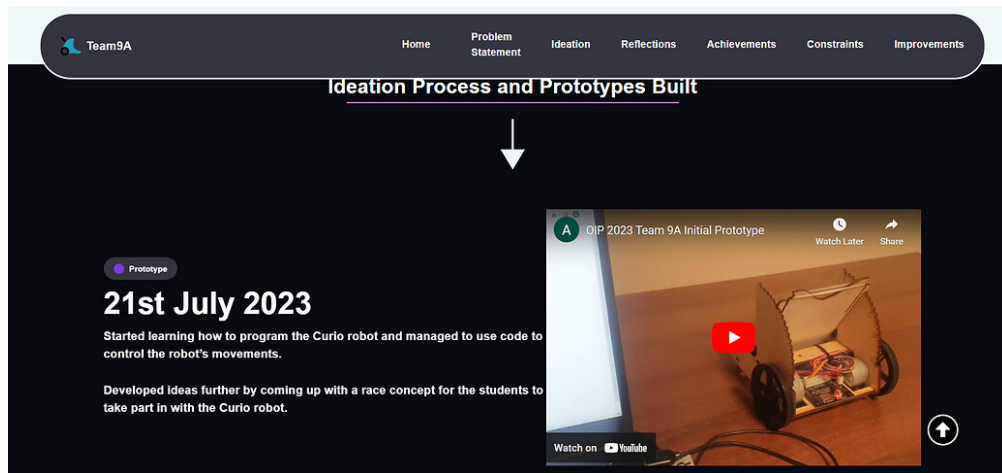


Website



Designing computing science activities using Curio platform

Overseas Immersion Programme (OIP) July- Aug 2023



2 Likes

[jgrizou](#) 18 August 2, 2023, 12:10am

All looking strong, keep going! and looking forward to people testing your activity on Thursday 😊

[amiir](#) 19 August 2, 2023, 3:01pm

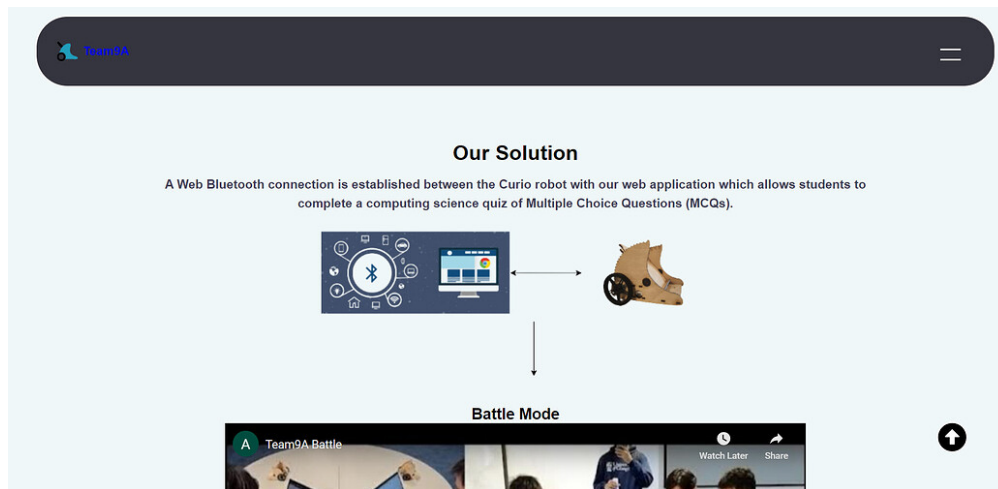
020823 Team 9A Dailies

After crafting the poster, we continued with website development. For Curio development, we did some more updates (added some audio for a better engaging experience) to finalise before the exhibition.

We also created a 10 seconds trailer for our solution which can be seen here:

[Trailer](#)

Some more snippets of the website in progress:





[amiir](#) 20 August 3, 2023, 9:07pm

(post deleted by author)

[changkw](#) 21 August 3, 2023, 9:08pm

030823 Team 9A Dailies

The team set up a game during the exhibition today, combining the idea of a maze and a battle. The game piqued the interest of our course mates as well as Prof Jonathan & his teaching assistants. They tried out our game and had fun with it, showing that our team has been successful in creating a game that is engaging and fun.

Here is a photo showing Prof Jonathan's engagement in the game:



[amiir](#) 22 August 4, 2023, 7:07pm

040823 Team 9A Dailies

Today, we had our final lecture regarding ethics in project design. We learned the importance of inclusion, listening and understanding of people's opinions when designing.

All in all, we would like to express our gratitude to all that made this journey fulfilling: our professors, project partners and tutors, friends and all that we crossed paths with.

Team 9A