NAMCC SUMMER ROBOTICS NEWLSTTER

MADE BY FTC TEAM CYBER SALAM #26903

THE WEEK AT A GLANCE

This week a new structure of classes was implemented where we had all the 3 classes in the multipurpose hall instead of their seperate rooms.

With this new structure, students were able to intereact with more students and instructors. This allowed the kids to be more productive and smarter about their designs and code. Students were also able to see what their fellow students in other classes have been up to.

We have seen the students progress a lot this week and we think they are on track to finish all their missions for the upcoming RoboOlympics competition.

WHAT'S NEXT

Next week students will be given an extra hour due to some battery issues they had during class this week. This will be sorted out by next class and students will be expected to arrive by 10:30 next week for class.

Next class will be the last class before the RoboOlympics competition. So, next class will also be dedicated to the kids preparing their robot for the competition

Students will work with their team members to create different attatchments and add new code to complete their last few missions.

FUN FACT

NASA's Mars Rovers

NASA has produced many Mars rovers that have been exploring Mars for years. Some of their names include *Spirit*, *Opportunity*, *Curiosity*, and *Perseverance*.

These robots have been programmed to sing themsleves the "Happy Birthday" to themselves on the day they were created. For example, *Curiosity* sang itself "Happy Birthday" on August 5th all alone on Mars.

ROBO RIDDLE

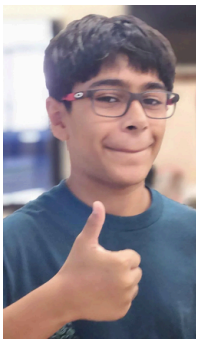
Answer to Last Riddle: A QR code

I have no brain, yet I make decisions.
I don't breathe, but I keep things in motion
i live inside machines, but I'm not made of metal.
Without me, robots just sit still.

What am I?

ROBOTICS IN REAL LIFE

By: Hammad Malik



When I heard that we needed trophies for the Robo-Olympics competition, I immediately thought about 3D printing the trophies and started to design the trophies. One design that I came across was a trophy made entirely of gears — I knew right away this was the direction I wanted to take. I started by creating a prototype using a browser-based CAD program called OnShape. At first, I attempted to model Lego-style gears from scratch, but once I realized the design wasn't going to meet my expectations. Looking for a better solution, I remembered goBilda, which offers downloadable STEP files of real FTC-compatible gears. I browsed through the available options, selected the gears I needed. I also built the base of the trophy in OnShape with custom text for the Robo Olympics. After 3D-printing a prototype using my Bambu Lab P1S printer, I noticed the design looked a bit too rough. To improve it, I went back into OnShape and began chamfering and filleting the base — techniques used to smooth or round out sharp corners. I also refined the text on the base and added a bold number "1" on the largest gear to highlight the winning position. After some final tweaks and detailing, I arrived at a design I was truly proud of — a gear-inspired trophy that represents both engineering and achievement.

CLASS 1 HIGHLIGHTS

This week, the students shared a space with the other two classes. The students focused on refining their mission programs and improving robot consistency. They tested new attachments, adjusted build designs, and practiced precise alignment on the mat. Mentors encouraged students to continue their progress and reflect on what worked best. Some teams experimented with different strategies to optimize for the Robo-Olympics, including improving their turning accuracy. Everyone helped one another troubleshoot and celebrated small wins.

CLASS 2 HIGHLIGHTS

Class 2 worked on a mix of different missions. Abdullah's group worked on building a basket to carry the octopus to its designated zone for the extra points in mission 09. Abdullah had the brilliant idea of having two motors the lift the basket to add extra support. Good job Abdullah! Adam's group worked on the shipping lanes mission where they tried to use an arm to flip the mechanism. Finally, Yasmin's group mainly worked on perfecting the mission 02 the shark mission. Overall,

CLASS 3 HIGHLIGHTS

Class 3 had a combined meeting with Class 1 and Class 2 in the MP Hall which had three separate tabletops set up for each class. Class 3 teams learned how to run code downloaded to the robot. For example, they had octopus mission downloaded to program #1. Then they switch to program #2 to execute the next mission. They are learning how to create separate code for each mission and run them just by switching the program number on the robot without requiring the laptop.

TEAM CYBER SALAM

Team Cyber Salam is a FIRST Tech Challenge Team with a mission to spread STEAM in our Muslim community. Our team aims to accomplish this mission by assissting NAMCC with their summer program. Our team competes from September to March working tirelessly to build a robot capable of completing the robot game in the best way possible. The robot shown to the right is one iteration of our robot during the season. Throughout the season, we won many accolades including second place in our area championships (also shown to the right). We are currently looking for new members to expand our team. Age ranges range from 8th grade through high school. The application process also consists of an in-person interview with the Cyber Salam robotics team at an assigned date.

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