VEX Robotics Competition

TEAM 15621A

#الإمارات_تستاهل

ENGINEERING BOOK

"15621A"

FRZJS

Vex Robotics competition spin up 2022-23

VEX ROBOTICS COMPETITION SPIN UP

Girl Powered
Redefining the face of STEM.

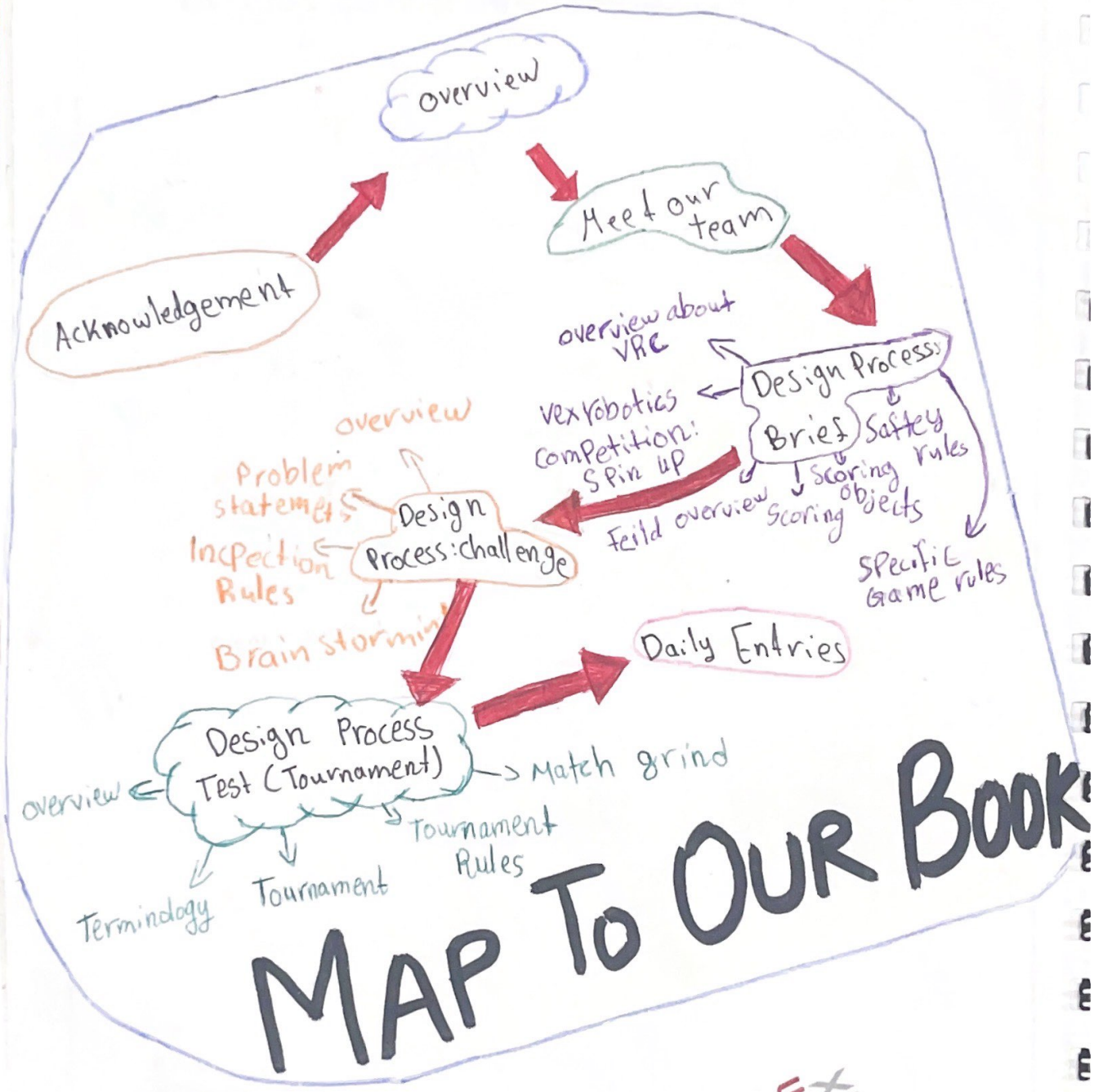
Robotics Engineering Book

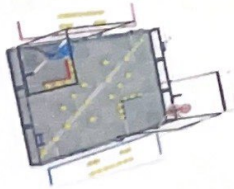
Presented by:

Team number – 15621 A
Team name – FRZJS
Um Al Momenin School for girls cycle 3

Start date - November 5, 2022 *End date- Continued*

MAP To OUR Book





VEX ROBOTICS COMPETITION

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1.Acknowledgement

First and foremost, praises and thanks to Allah, the Almighty, for His showers of blessings throughout our journey in this competition.

We would like to express our sincere gratitude to all the sponsors of this competition and for giving us opportunity to participate in this competition.

We would like to express our deep and sincere thanks to Mr Ayman Al- Najjar and Ms Amina Almaamari for their motivational words.

Besides them, we would like to thank our supervisor Ms Shafaque and Ms Safa to stay with us at each step. Their guidance helped us a lot throughout our journey.

We would also like to thank training, volunteer and judges team for the smooth conduction of the competition.

Last but not the least, we would like to extend our thank to our family for believing in us.

Sincerely,

Team 15621A

2. Overview

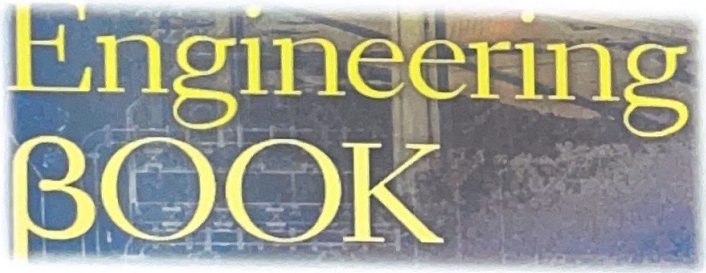
This engineering book will describe our journey in this VEX VRC robotic competition from the beginning till now and we followed engineering design process to complete this book.

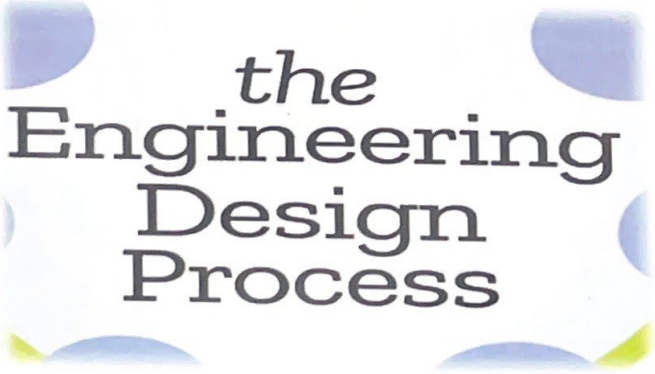
Hope you will enjoy reading it.

Thanks for your valuable time.

With warm regards,

Team 15621A





3.Meet our team

1.Zainab Albloushi – *Driver of the robot, Her job is to drive the robot in the competition and also to fix the robot.*

2.Alreem Alabdouli- *Programmer cum engineer, Her role is to program the robot and helped engineers in fixing and creating the robot.*

3.Faiza Jassem Albusumait– *Engineer cum programmer, Her job is to inspect the robot , identify the issue in robot and to find out the feasible solution*

4. Fajer Khaled Alawadhi – *Alternative driver , Her role is to help first driver and She can act as a replacement driver*

5. Jenan Alali- *All rounder, Her role is to help everyone in the teams and report writing*

4 .Design Process: Brief

4.1 Overview about VRC Spin

This section provides an introduction to the VEX Robotics Competition VRC Spin Up.

VEX Robotics Competition Spin Up is not just a game because it is fun to play - it is a vehicle for teaching (and testing) teamwork, persevering in the face of hardship, and practicing a methodology to approach and solve new challenges with confidence.

VEX Robotics Competition game is more than just a set of game objects worth varying amounts of points. It is an opportunity to hone the life-long skills that will characterize the problem-solving leaders of tomorrow.

4.2 VEX Robotics Competition Spin Up: A Primer

- VEX Robotics Competition Spin Up is played on a 12'x12' square field
- In Head-to-Head Matches, two (2) Alliances - one (1) "red" and one (1) "blue," composed of two (2) Teams each - compete in Matches consisting of a fifteen-second (0:15) Autonomous Period followed by a one minute and forty-five-second (1:45) Driver Controlled Period.
- The object of the game is to attain a higher score than the opposing Alliance by Scoring Discs in Goals, Owning Rollers, and Covering field tiles at the end of the Match.
- An Autonomous Win Point is awarded to any Alliance that Owns two Rollers and has Scored at least two Discs in the High Goal at the end of the Autonomous Period.
- An Autonomous Bonus is awarded to the Alliance that has the most points at the end of the Autonomous Period.
- Teams may also compete in Robot Skills Matches, where one (1) Robot tries to score as many points as possible.

4.3 Field Overview

The VEX Robotics Competition Spin Up field consists of the following:

- Sixty (60) Discs
  - Eight (8) that begin as Preloads, four (4) per Alliance
  - Fourteen (14) that are used as Match Load Discs, seven (7) per Alliance
  - Thirty-eight (38) that begin on the Field
- Four (4) Rollers
- Two (2) High Goals, one per Alliance
- Two (2) Nets, one behind each High Goal
- Two (2) Loaders, one in front of each Alliance Station

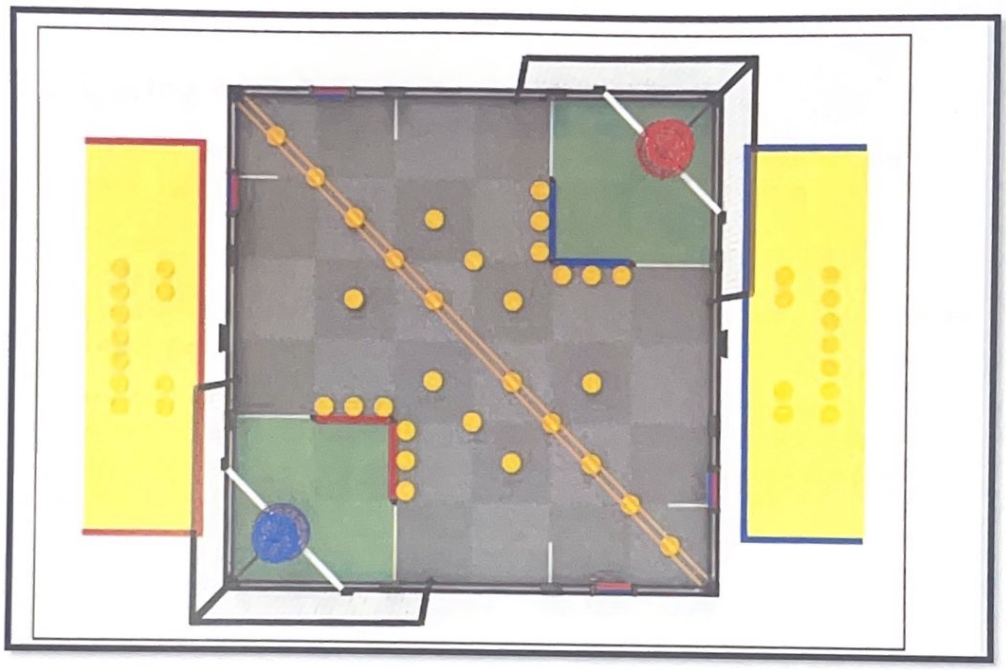


FIGURE 2 TOP VIEW OF FIELD

a. Not fully supported by a robot of the same colour Alliance as the Low Goal.
b. At least partially contained within the vertical projection of the Low Goal (i.e., "breaking the plane" of the Low Goal).
c. Not contacting any field tiles outside of the Low Goal.
d. Not contacting the Net.
e. Not contacting the High Goal, or any of the supporting structures underneath the High Goal

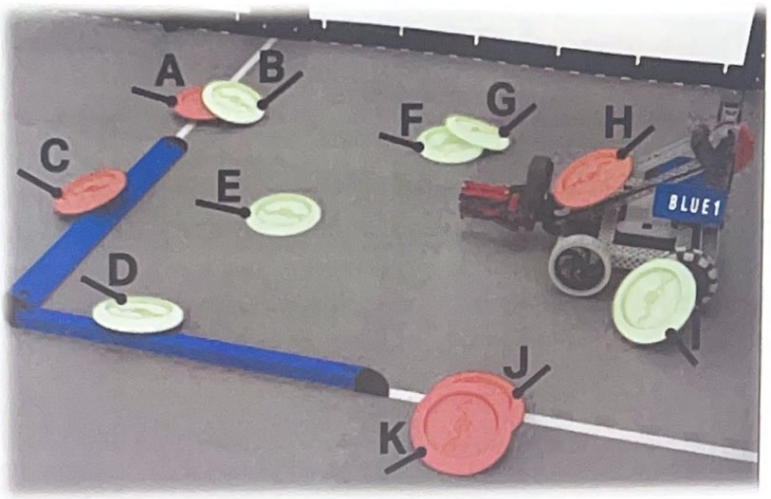


FIGURE 4 LOW GOAL WITH DISCS

Rollers:

A Roller is Owned by an Alliance if the area between the Roller's pointers is entirely that Alliance's colour, when viewed from above.

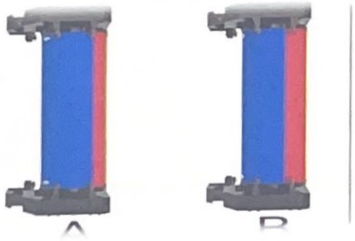


FIGURE 5 EXAMPLE OF ROLLER STATE

4.7 Specific Game Rules

Prior to the start of each Match, the Robot must be placed such that it is:

a. Contacting at least one (1) of the grey foam field tiles adjacent to the field perimeter that are between a pair of Starting Lines on their Alliance's side of the Autonomous Line.

b. Not contacting any other grey foam field tiles.

c. Not contacting any Discs other than the Preloads.

d. Not contacting another Robot.

e. Not contacting any Field Elements, such as the Barrier or the Net.

i. Contact with the field perimeter is permitted, but not required.

f. Contacting no more than two (2) Preloads.

g. Not contacting any grey foam tiles inside the Low Goal.

h. Within the required starting volume.

5. Design Process: Challenge

5.1 Overview

This section provides rules and requirements for the design and construction of our Robot. A VEX Robotics Competition Robot is a remotely operated and / or autonomous vehicle designed and built by a registered VEX Robotics Competition Team to perform specific tasks.

5.2 Problem statement

We need to design and construct our robot as per the specific rules and limitations provided in the inspection rubric and compete with other teams to complete the objective. This journey of designing, construction and playing the tournament allows us to hone critical computational thinking skills needed to succeed in both the 21st century's workforce and in everyday life.

5.3 Inspection rules

Following are some rules to be follow to get green pass for the tournament

- One Robot per Team.
- Robots must represent the Team's skill level – It must be designed and programmed by the team members
- Robots must fit in a sizing box-it must be able to satisfy and begin each Match in a volume smaller than 18" (457.2 mm) long by 18" (457.2 mm) wide by 18" (457.2 mm) tall.
- Robots are built from the VEX V5 system

SKU	Description
276-2174 / 276-4859	Limit Switch V1 / V2
276-2159	Bumper Switch
276-2156	Optical Shaft Encoder
276-2216	Potentiometer
276-2155	Ultrasonic Range Finder
276-2176	LED Indicator
276-2333	Yaw Rate Gyroscope
276-2332	Analog Accelerometer V1.0
276-2154	Line Tracker
276-1380	Jumper
276-2158	Light Sensor

FIGURE 7 PERMISSIBLE COMPONENT

- A limited amount of custom plastic is allowed.

- Decorations are allowed.
- Motors and Pneumatics are limited.
- Electrical power comes from VEX batteries only.
- One or two Controllers per Robot.
- No modifications to electronic or pneumatic components are allowed.
- Custom V5 Smart Cables are allowed.
- Keep the power button accessible.
- Officially registered Team numbers must be displayed on Robot license plates

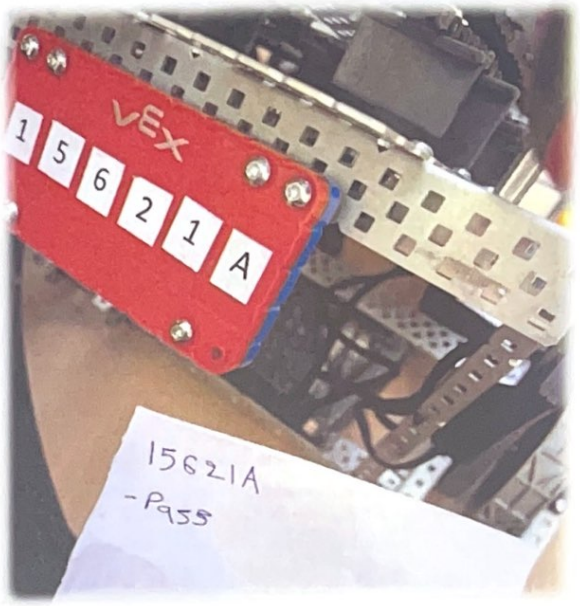


FIGURE 8 OUR LICENSE PLATE

5.4 Design Process: Brainstorming

This section provides our strategies, robot design, autonomous code, and final design of robot.

All our team member divided the work , finished it and did the peer review.

Our strategies

Our strategies will be explained by the following mind map-

FIGURE 9 BRAINSTORMING

Why these strategies?

As we were building the robot from the basic vex kit. We experienced in the game that all other robots are so strong and robust. So, we mainly focused on the points where we can do our best. We chose teamwork and other strategies as mentioned above because, it enables our team to share ideas and responsibilities, which helps reduce stress on everyone, allowing us to be meticulous and thorough when completing tasks. This will enable us to overcome our weak point and better performance in pressure.

FIGURE 10 BENEFITS OF PARTICIPATION IN VEX

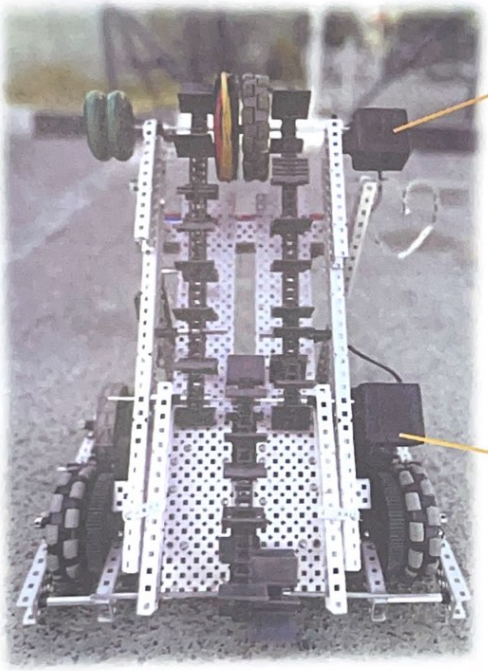
VEX ROBOTICS COMPETITION

Robot components

In the beginning, the base is in the form of an H base, and it consists of 4 wheels and two motors, as they are connected to each other and are called the drivetrain.

Also here is the intake, which is responsible for pulling the discs from the floor to the robot and drop it in the area we want as it is connected to two motors to increase the force in the pull.

And most important at the top the roller responsible for rolling the roller in the ring during the match and its speed reaches 200rpm

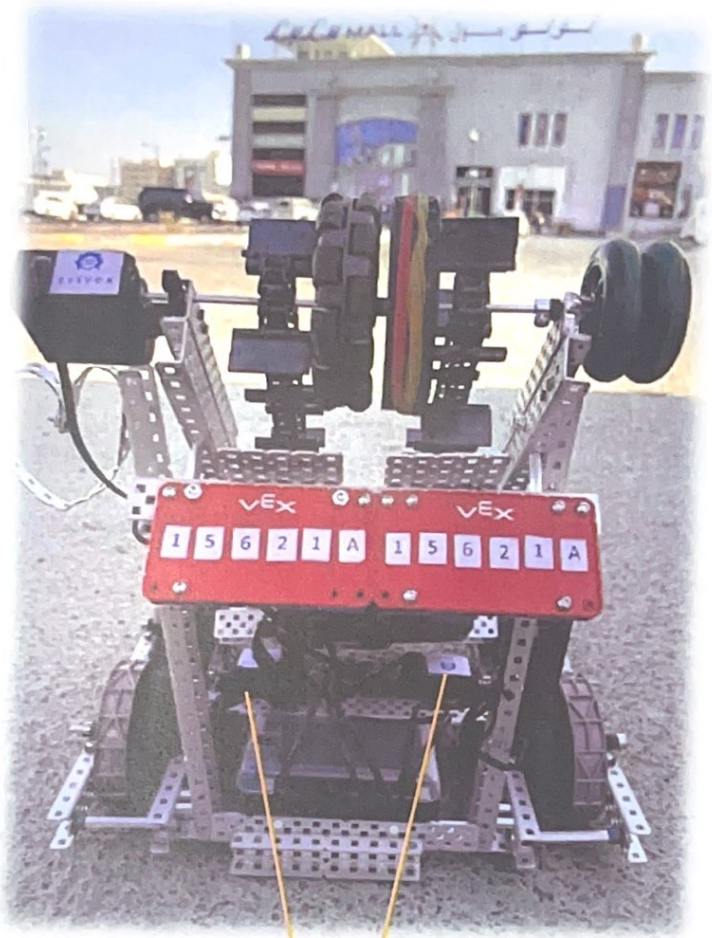


This is a motor(motor5), it spins a small wheel with chains to pull up the discs from the ground

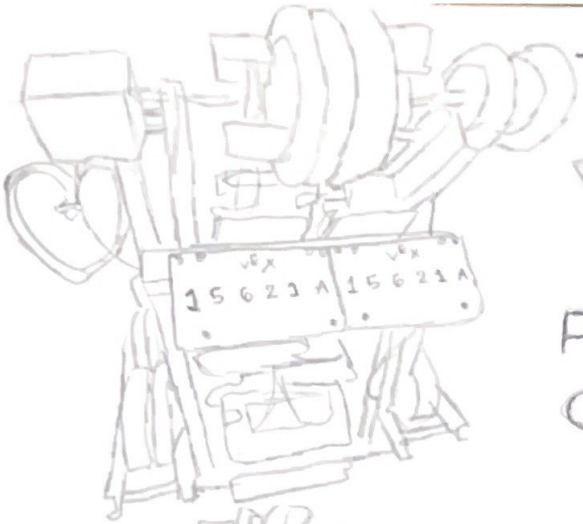
This is another motor(motor6), it spins the wheels so we can change the color of the roller. And at the same time it spins the top chain for the disc to get pulled up

This is the battery; it works together with the brain to power a constant and good performance even when the charge of the battery is low

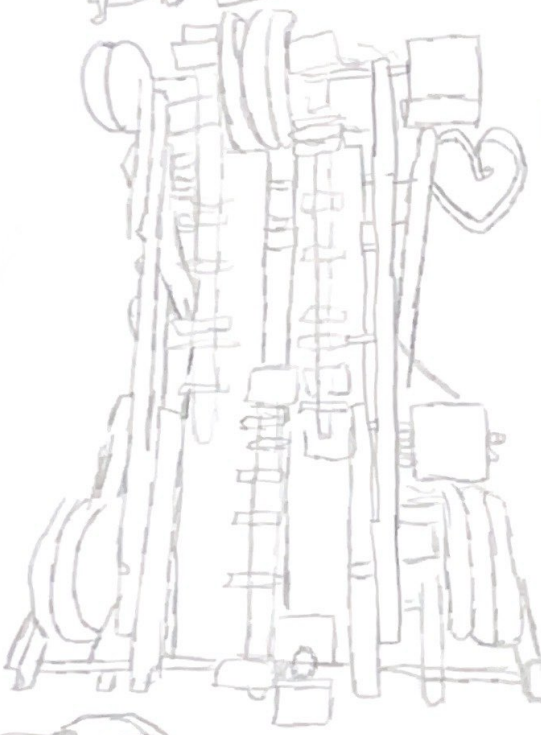
This is the brain; it displays information about our robot. And is responsible for running our program code and reading the devices connected to the brain.

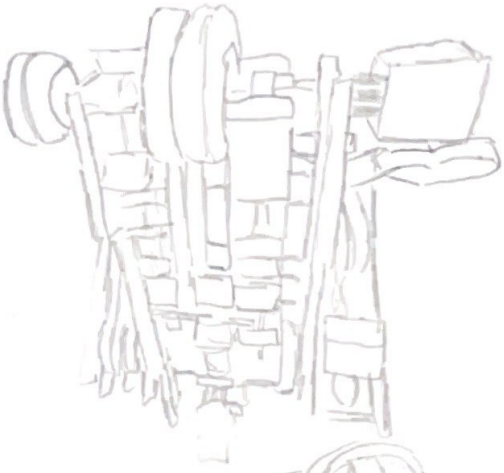


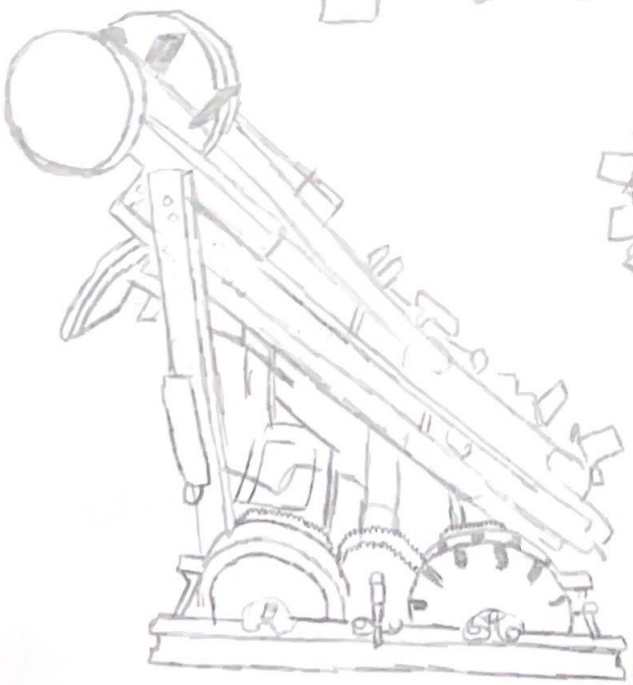
These 2 motors are our drivetrains, they are connected to a wheel which is connected to 2 driving wheels. For the robot to move in all directions

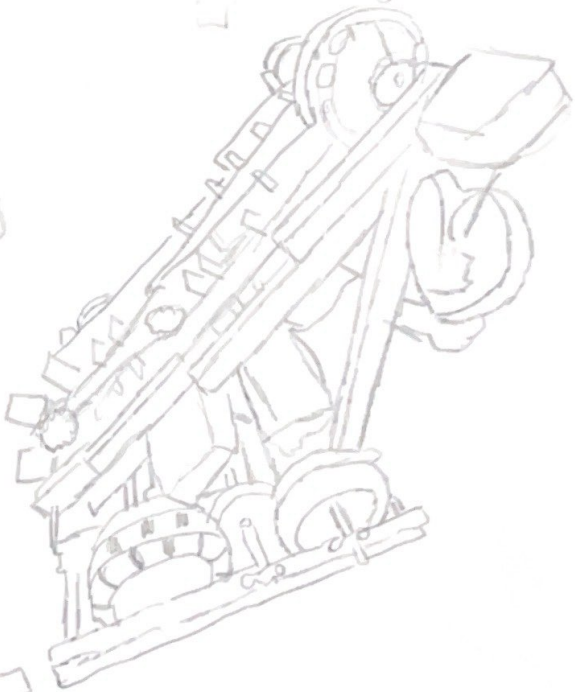


VEX ROBOTICS COMPETITION









PERSPECTIVE DRAWING

GROUP # 15621A (FRZJS)

Maths formula which can be useful

Diameter, d, Measurement of a straight line across the centre of a circle,

$d = 2\ r$

r= radius of the circle

Circumference, C, The total distance around the outside of a circle,

$C = \pi\ d$

Mathematics of Turning 360, Calculation of distance

Distance = Circumference * Turns

Wheel Speed Formula, Wheel speed commonly refers to the instantaneous tangential velocity of a wheel at a specific diameter that is rotating at a constant RPM.

The following formula is used to calculate a wheel speed.

S= 2 * [PI * (D/2)] * [RPM/60]

- Where S is the wheel speed
- RPM is the rotations per minute
- D is the diameter

Programming snippet

vex.h - Notepad

File Edit Format View Help

```
/*----------------------------------------------------------------------------*/
/*                                                                            */
/*    Module:       vex.h                                                     */
/*    Author:       Vex Robotics                                              */
/*    Created:      1 Feb 2019                                                */
/*    Description:  Default header for V5 projects                            */
/*                                                                            */
/*----------------------------------------------------------------------------*/
//
#include <math.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>

#include "v5.h"
#include "v5_vcs.h"

#include "robot-config.h"

#define waitUntil(condition)                                                   \
  do {                                                                         \
    wait(5, msec);                                                             \
  } while (!(condition))

#define repeat(iterations)                                                     \
  for (int iterator = 0; iterator < iterations; iterator++)
```

FIGURE 11 CODE SNIPPETS

main.cpp

```
1  /*----------------------------------------------------------------------------*/
2  /*                                                                            */
3  /*    Module:       main.cpp                                                  */
4  /*    Author:       C:\Users\ROBOTIC                                          */
5  /*    Created:      Thu Dec 01 2022                                           */
6  /*    Description:  V5 project                                                */
7  /*                                                                            */
8  /*----------------------------------------------------------------------------*/
9
10 // ---- START VEXCODE CONFIGURED DEVICES ----
11 // Robot Configuration:
12 // [Name]              [Type]        [Port(s)]
13 // Drivetrain          drivetrain    10, 1
14 // Intake              motor         3
15 // Controller1         controller
16 // rol                 motor         5
17 // ---- END VEXCODE CONFIGURED DEVICES ----
18
19 #include "vex.h"
20
21 using namespace vex;
```

FIGURE 12 CODE SNIPPETS

main.cpp

```
competition Competition;

///
// Set Motor Functions
//   - this sets motors between -12000 and 12000.  i'm used to
//   - -100 to 100, so the "scale" variable lets me use that as
//   - inputs and scales it to -12000 to 12000
///

// Set voltage
const int SCALE = 120;

void set_intake(int input) {
  intake.spin(fwd, input * SCALE, voltageUnits::mV);

}

void set_rol(int input) {
  rol.spin(fwd, input * SCALE, voltageUnits::mV);

}
```

FIGURE 13 CODE SNIPPETS

```
/*---------------------------------------------------------------------------*/
/*                                                                           */
/*                            Autonomous Task                                */
/*                                                                           */
/*  This task is used to control your robot during the autonomous phase of   */
/*  a VEX Competition.                                                       */
/*                                                                           */
/*  You must modify the code to add your own robot specific commands here.   */
/*---------------------------------------------------------------------------*/

void autonomous(void) {
  // ..........................................................................

  // This is to make the robot move reverse 9 inches you can change it til it be perfect
  Drivetrain.driveFor(reverse, 9, inches);
  // This code is to make the roller and intake to move in reverse 200 dgree till it roll the roller in the filed
  intake.spinFor(reverse, 200, degrees);
  // ..........................................................................
}
```

FIGURE 14 CODE SNIPPETS

```
86
87  /*----------------------------------------------------------------------------*/
88  /*                                                                            */
89  /*                              User Control Task                             */
90  /*                                                                            */
91  /*  This task is used to control your robot during the user control phase of */
92  /*  a VEX Competition.                                                        */
93  /*                                                                            */
94  /*  You must modify the code to add your own robot specific commands here.    */
95  /*----------------------------------------------------------------------------*/
96  int speeds[] = {0, 127, 115, 110};
97  int speed = 0;
98  void usercontrol(void) {
99    // User control code here, inside the loop
100   while (1) {
101
102     // calculate the drivetrain motor velocities from the controller joystick axies
103       // left = Axis3 + Axis4
104       // right = Axis3 - Axis4
105       if (Controller1.ButtonR1.pressing()) {
106       set_intake(127);
```

FIGURE 15 CODE SNIPPETS

```
104       // right = Axis3 - Axis4
105       if (Controller1.ButtonR1.pressing()) {
106         set_intake(127);
107       } else if (Controller1.ButtonR2.pressing()) {
108         set_intake(-127);
109       } else {
110         set_intake(0);
111       }
112       if (Controller1.ButtonR1.pressing()) {
113         set_rol(127);
114       } else if (Controller1.ButtonR2.pressing()) {
115         set_rol(-127);
116       } else {
117         set_rol(0);
118       }
119
120
121       wait(20, msec); // Sleep the task for a short amount of time to
122                       // prevent wasted resources.
123     }
124   }
125
```

FIGURE 16 CODE SNIPPETS

Automatically Generated Code - Enable "Expert Robot Configuration" to manually edit

```
#include "vex.h"

using namespace vex;
using signature = vision::signature;
using code = vision::code;

// A global instance of brain used for printing to the V5 Brain screen
brain  Brain;

// VEXcode device constructors
motor LeftDriveSmart = motor(PORT10, ratio18_1, true);
motor RightDriveSmart = motor(PORT1, ratio18_1, false);
drivetrain Drivetrain = drivetrain(LeftDriveSmart, RightDriveSmart, 319.19, 17.525999999999996, 444.5, mm, 1);
motor intake = motor(PORT3, ratio18_1, false);
controller Controller1 = controller(primary);
motor rol = motor(PORT5, ratio18_1, false);
```

FIGURE 17 CODE SNIPPETS

6. Design Process: Test (Tournament)

6.1 Overview

VEX Robotics Competition Qualification and Elimination Matches are played in a Head-to-Head tournament format. Qualification Matches are used to rank Teams based on Win Points (WP), Autonomous Points (AP), and Strength of Schedule Points (SP). The top-ranked Teams then form Alliances to participate in Elimination Matches and determine the tournament champions

6.2 Terminology

- Autonomous Points (AP) - The second basis of ranking Teams. An Alliance who wins the Autonomous
  Bonus during a Qualification Match earns ten (10) Autonomous Points. In the event of a tie, both Alliances will receive five (5) Autonomous Points.
- Autonomous Win Point - One (1) Win Point (WP) given to an Alliance that Owns two (2) Rollers and has scored at least two (2) Discs in their Alliance-coloured High Goal at the end of the Autonomous Period.
  Both Alliances can earn this Win Point if both Alliances accomplish this task
- Strength of Schedule Points (SP) - The third basis of ranking Teams. Strength of Schedule Points are equivalent to the score of the losing Alliance in a Qualification Match. In the event of a tie, both Alliances receive SPs equal to the tied score. If both Teams on an Alliance are Disqualified, the Teams on the not-Disqualified Alliance will receive their own score as SPs for that Match.
- Win Points (WP) - The first basis of ranking Teams. Teams will receive zero (0), one (1), two (2), or three (3) Win Points for each Qualification Match. Unless a Team is Disqualified, both Teams on an Alliance always earn the same number of WPs.
  - One (1) WP is awarded for completing the Autonomous Win Point task(s).
  - Two (2) WPs are awarded for winning a Qualification Match.
  - One (1) WP is awarded for tying a Qualification Match.
  - Zero (0) WPs are awarded for losing a Qualification Match

6.3 Tournament rules

Here are some tournament rules which we need to follow for smooth conduction of game-

- The Head Referee has ultimate and final authority on all gameplay ruling decisions during the competition.
- The Event Partner has ultimate authority regarding all non-gameplay decisions during an event.
- A Team's Robot and / or Drive Team Member should attend every Match.
- Robots at the field must be ready to play
- Fields at an event must be consistent with each other

6.4 Match Grid

Qualification Match List

VRC Spin Up Pre-National Event - Al Ain / Ajman

Um Al Mo'mneen girl's school (156215A)

Match	Time	Red 1	Red 2	Blue 1	Blue 2	Red score	Blue score	Winner
Q3	Sat 4-2-23 / 1:50 PM	41318B	55655C	15621A	90054A	68	69	Blue
Q7	Sat 4-2-23 / 2:24 PM	77030B	14701A	80286A	15621A	47	27	Red
Q14	Sat 4-2-23 / 3:12 PM	15621A	38603A	14701B	44233A	17	61	Blue
Q17	Sat 4-2-23 / 3:32 PM	15621A	43519A	44332A	41318A	42	74	Blue
Q25	Sat 4-2-23 / 4:20 PM	55655B	44233A	15621A	55547B	111	24	Red
Q4	Sat 11-2-23/ 1:54 PM	93644F	14701B	44235A	15621A	65	65	TIE
Q11	Sat 11-2-23/ 1:54 PM	15818A	15621A	83661A	55655A	45	83	Blue
Q1	Sun 12-2-23/ 2:04 PM	15818A	14701B	77030B	15621A	45	48	Blue
Q6	Sun 12-2-23/ 2:46PM	15621A	44233B	11982A	11982C	75	96	Blue
Q10	Sun 12-2-23/ 3:14 PM	11982A	66636A	15621A	80286A	90	49	Red
Q16	Sun 12-2-23/ 4:19 PM	15621A	90054A	44332A	44233A	58	75	Blue
Q19	Sun 12-2-23/ 4:43 PM	15621A	80286B	90736C	44235A	64	89	Blue

7. Daily Entries

The day when we registered for the competition

When we got the information from the principal that we have this competition, we were super excited and nervous too, that whether we will be the part of the team or not.

Thankfully, our teacher did the survey about the participation in the previous competitions and choose the students who already have participated in the competition.

We got the confirmation from the principal, and we started to work on one principle – "Team work"

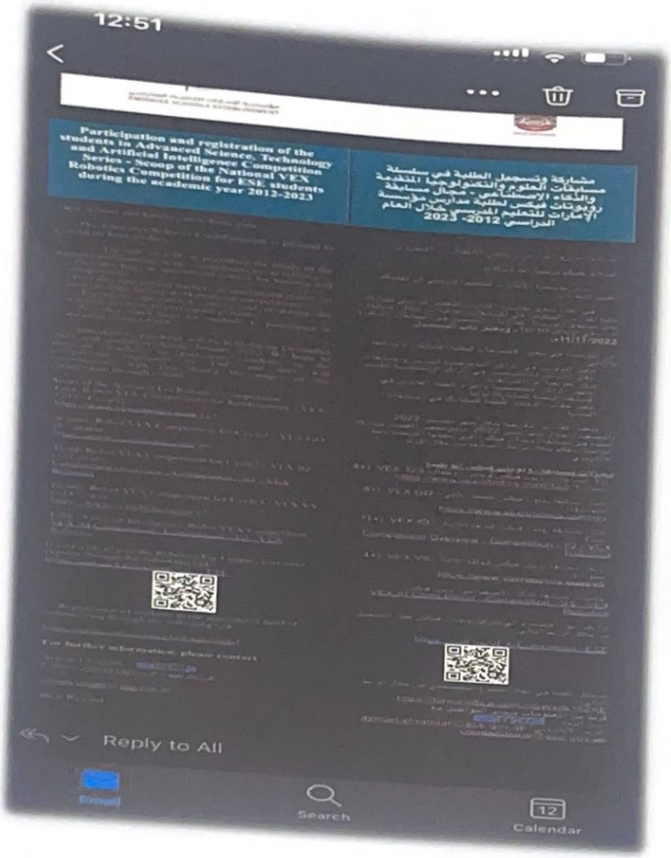


FIGURE 18 COMPETITION ANNOUNCEMENT

Sunday, November 5, 2022

- ✓ We went to Hamad Bin Mohammed Al Sharqi School, Fujairah to know more about the competition
- ✓ Mr Ahmed Matar briefed us about the competition

FIGURE 19 TRAINING GLIMPSE

Saturday, November 12, 2022

- ✓ we started getting training on assembling and disassembling the robot with Mr. Ahmed Matar.
- ✓ This day we divided our role with the help of the supervisor.

FIGURE 20 TRAINING

Sunday, November 27, 2022

- ✓ Went for the training in Dubai.
- ✓ Venue- Ahmed Bin Sulayem School which is an official training centre.
- ✓ Learnt about the field, kits and robot.

FIGURE 21 AHMED BIN SULAYEM SCHOOL

From November 27 to December 27, 2022

- ✓ Got the VEX kit
- ✓ Started designing and building the robot
- ✓ Alreem Alabdouli started working on sketch of the design
- ✓ Zainab, Fajer and Faiza started building the robot after everyone passed the design done by Alreem
- ✓ Jeenan was helping building team and sketching team

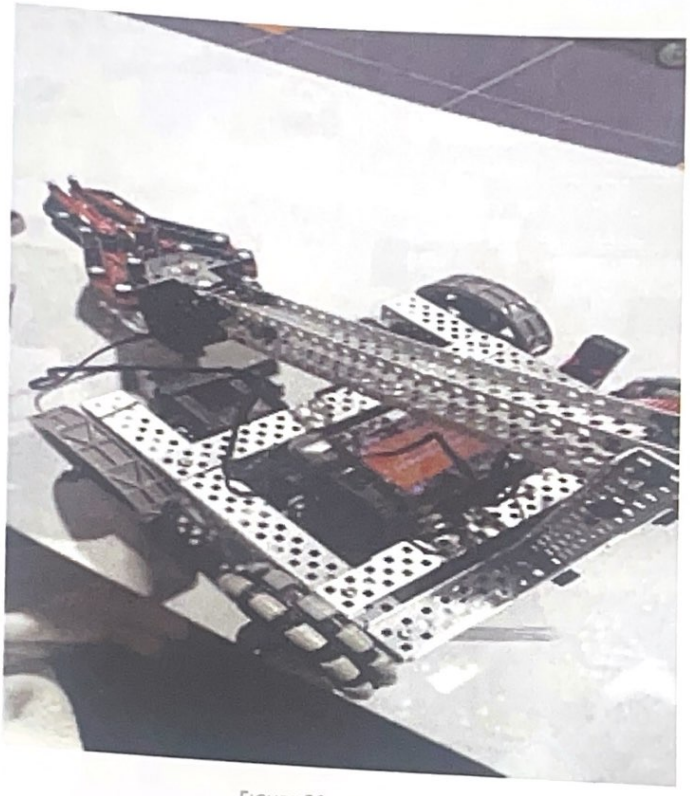


FIGURE 22 FIRST ROBOT

Tuesday, December 27, 2022

- ✓ went to Ahmed bin Slyam School for another training
- ✓ we got to know that our robot is not suitable for the competition
- ✓ Shocking moment for us
- ✓ Again started it from the scratch.

FIGURE 23 TRAINING

FIGURE 24 MR AHMED TALKING ABOUT VEX

Wednesday, December 28, 2022

- ✓ learnt more about programming from Mr. Ismail

FIGURE 25 ROBOT AFTER PROGRAMMING

January 2023

- ✓ We started building the new robot
- ✓ we started the programming also.
- ✓ Below mentioned is our role -
- ✓ The robot were fixed by Zainab and Fajer as per the requirements.
- ✓ Programming were done by Alreem and Faiza.
- ✓ Jenan was working as helper to both the team.
- ✓ Allhamdullilah, we completed the robot on time.

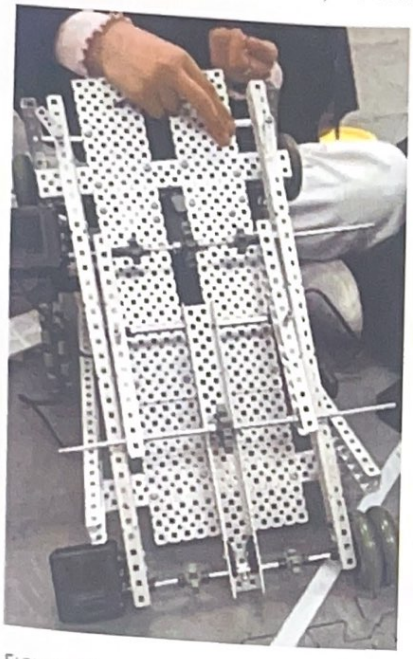


FIGURE 26 WORKING ON ROBOT

FIGURE 27 CUTTING EXTRA PARTS

Saturday, January 21, 2023 (Robot inspection day)

- ✓ It was the first step to enter the competition.
- ✓ We went to Zayed educational complex, robotic clinics in Dubai
- ✓ At the beginning, we got yellow pass as it did not complete all the criteria
- ✓ We did not give up we started searching for the equipment and by Allah's grace we passed all the criteria and got the green pass in the end

FIGURE 28 OUR TEAM AT ZAYED COMPLEX DUABI

FIGURE 29 ZAINAB WITH ROBOT

Saturday, February 4, 2023 (First competition Day at Al Ain)

- ✓ We were anxious and overwhelmed as it was the first time when we played with another team
- ✓ Firstly, in the inspection our robot didn't pass as it had some unwanted parts, but we didn't stop we removed the extra part quickly and entered the competition.
- ✓ In our first match we played, our robot got stuck but we did well and our team won.
- ✓ In rest of the matches, we tried our best but we lost. we learnt a lot today from our mistakes. We took the oath, that we will do our best in next match.
- ✓ In the award ceremony we were surprised as we got the judges award, Allhamdullilah. This gave a lot of motivation to us

FIGURE 30 TEAM MATCH TALLY

FIGURE 31 OUR TEAM WITH JUDGES AWARD

Saturday, February 11, 2023 (Competition Day at Ajman)

- ✓ We passed he inspection and we went for our matches, today there were only two matches
- ✓ In our first match, it got tie up with 65 points each team.
- ✓ In our second match, unfortunately we lost but it taught us many things.
- ✓ Today we went back without achieving any award but we got motivated and emotional from the words of Mr Ayman and MS Amina Almomari.
- ✓ Today we learnt failure is the key to success, whatever we are doing , we are doing for our future we are doing for our nation.
- ✓ Hope to win in next match.

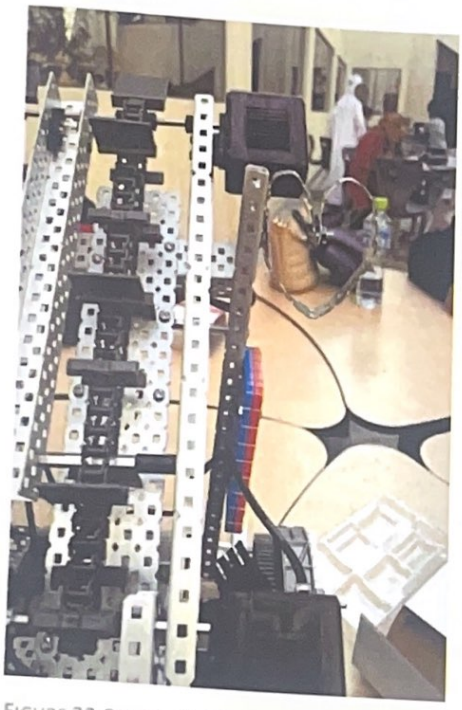


FIGURE 32 OUR ROBOT

FIGURE 33 MATCH GRID

Sunday, February 12, 2023 (Competition Day 2 at Ajman)

- ✓ It was good day, we had meeting in the morning with the team and our supervisor
- ✓ We played 5 matches, won 1 and lost 4
- ✓ We took autograph from Mr Ayman and Ms Amlna
- ✓ Lastly, we won powered girl award for our determination and efforts
- ✓ Ms Amina Almaamari appreciated us for our hard work and strong will
- ✓ We learnt a lot today.

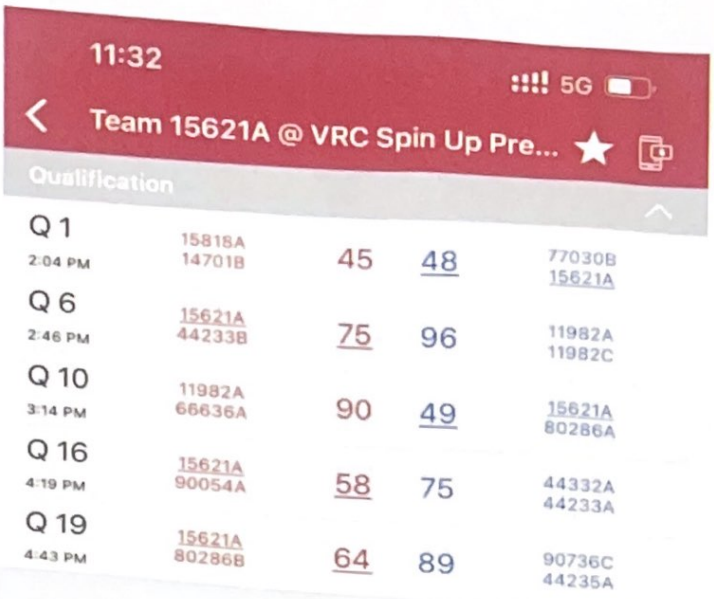


FIGURE 34 GAME GRID

FIGURE 35 WINNING MOMENT

From February 13,2023 to February 17, 2023

- ✓ During these days, we tried to work on our performance
- ✓ We changed the wheels of the robot
- ✓ We added omni wheels
- ✓ We added traction wheels
- ✓ We made quite changes in the robot
- ✓ We changed some programming
- ✓ We planned some extra activities for more interactions and entertainment

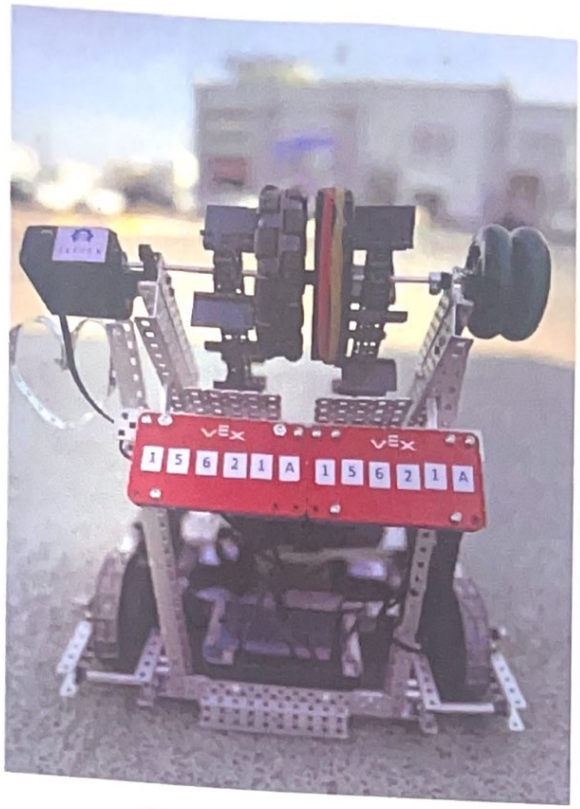


FIGURE 36 UPDATED ROBOT

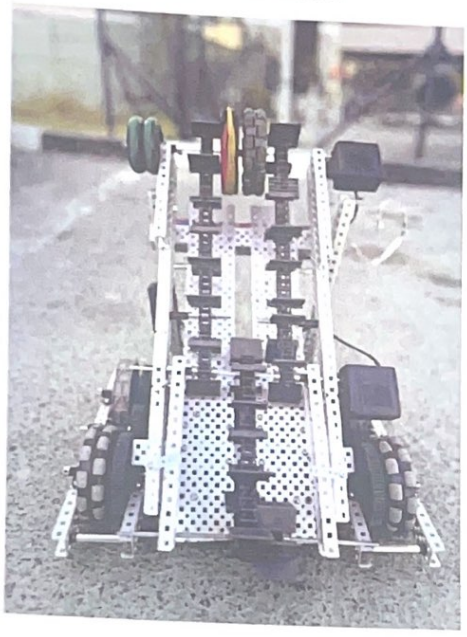


FIGURE 37 FRONT VIEW OF ROBOT

Random memorable moments

Sunday, February 19, 2023 (Zayed Complex, Dubai)

Day 2

- It was second day at Dubai.
- We played 7 matches today.
- First match was Q2.
- We were blue.
- The day started with a lost.
- We did little practise afterwards.
- Our second match was Q7.
- We won this match, Allahamdullilah!
- It boosted our confidence a lot
- All together, we won three matches together.
- In skills, we got 26 score, not good obviously!
- This score is less than the last one.
- But, we learnt where we need to work.
- We ordered food from Mc'D and ate after we finished all the matches
- We discussed our strategies and reason for loosing the matches during our lunch.
- We talked to Ms. Ameena, she motivated us.
- We also saw other team matches, to cheer them up and to learn from them.
- finally, it was ceremony time, we were shocked and surprised to see our name in the award list.
- We won "Design Award".
- We all were so excited after this
- It was like a real source of motivation for whole team
- Overall, it become a reason for our happiness.
- Adding this award, total award become 5.
- In next some Pages, you will find our match grid and many other things

OUR FAV. TEAM

VEX Robotics Competition

Our favorite team is (sailors team). They stood out to us the most. we loved their determination and their way of thinking. Their strategies, how cooperative they are. They are working as one hand and it shows in their work. And what attracted us the most is their way of reacting after winning or losing, they accept it no matter what. They are super friendly and sweet. They always motivate us and support us. we are extremly happy that they made it this far and we wish them all the best. TY030B

From,
FRZJS (15621A)

♡ you are our favorite team..
from: sailors UAE Team
(Maryam.S)

Aiku♡

I love you♡
From: sailors UAE Team
(Nour.A)

this competition give us you guys as friends thanks to VeX
-from: sailors UAE team (Sara Ismail)

-All the best♡
From FIG

Match Grid (February 19, 2023)

Qualification:

Q2	44233A 38603A	94	25	15621A 83661B
Q7	41455A 15621A	76	62	38603A 83661A
Q11	15621A 44332A	31	86	41455A 44233B
Q12	15621A 55547A	99	31	14701B 15818A
Q16	14701B 83661B	14	44	15621A 14701A
Q18	83661A 55547B	93	87	15621A 55547A
Q24	44233B 44235A	73	69	15621A 55547B

Message from Girl Powered Our Inspiration

We need more training and moving forward because you are creative

ALL due respect and appreciation for the requests and teachers of Umm AL-Mu'minin School

Ayman ELnaggar
12/12/2023

to Paser:

We respect you and your team supervisor, we hope to achieve the competition and qualified to national competition and get first Place

Ashf
Manager of ESC
12/12/2023

Things We learnt from Vex VRC So far

- Vex taught us many things.
- We can't mentioned all, because some of the Learning are unexpressable in words
- First thing which we learnt is competition spirit, How to accept the result, How to cheer our competitors
- We learnt how to deal in pressure.
- We learnt how to work with the team
- Secondly, we also learnt how to communicate with other team, and posses the good things from them.
-

هذي المسابقة ليست مجرد مسابقة بل انها مستقبل الإمارات ♡

- This competition become the part of our life
- It gave us a path for our future.
- It boosted us to pushing forward during tough time
- It enhances our skills.
- We learnt better understanding how to deal with conflicting opinion and ideas.
- We learnt collaborative, and STEM skills.
- Overall, this journey was amazing, full of motivation, learning and memories.
- Hope to make it to final, Insha Allah!

Saturday, February 18, 2023. (Zayed Complex, Dubai)

→ Today we played 6 matches.
→ Our first match number was 82.
→ Unfortunetly, we lost first match by 23 points.
→ In second Match, we won, Allahamdullilah.
→ We played really well in our second match.
→ We did three rollers and our autonomous worked.
→ In skills, we got good scores.
→ We couldn't play the third match.
→ As, we were doing skill test, so we missed third match.
→ In our fourth match, our alliance didn't come.
→ So, we lost third and fourth mateh in a row.
→ We made friends, Team SAILOR, We interacted with them.
→ In fifth match, we won by huge difference
→ Our score was 85 and other team score was 31.
→ In our last match we lost but failure is the key to success. We learnt alot.
→ Finally, we won "INNOVATIVE AWARD".
→ Overall, It was great day for us.
→ Also, Today we arranged some extra things like cookies, our name tag, tea, and canvas to write something from other team.
→ We are full motivated, and focussing on the final now
→ In next Page, you can find some glimpse of today and match grid
→ Waiting for the final.

Match Grid (February 18, 2023)

Qualification :-

Q2 1:04 Pm	97100X 44233B	53	30	15621A 83661B
Q7 1:41 Pm	15621A 80286B	51	31	44332A 97100Y
Q14 2:24 Pm	66636A 44233B	76	0	80286A 15621A
Q17 2:41 Pm	15621A 15818A	10	89	44233A 43519A
Q27 3:33 Pm	15621A 55547A	85	31	55547B 38603A
Q31 3:53 Pm	90054A 77182A	83	58	83661A 15621A

Girl Powered
Redefining the face of STEM

I Robots