

COMET

Al Hamraa International School

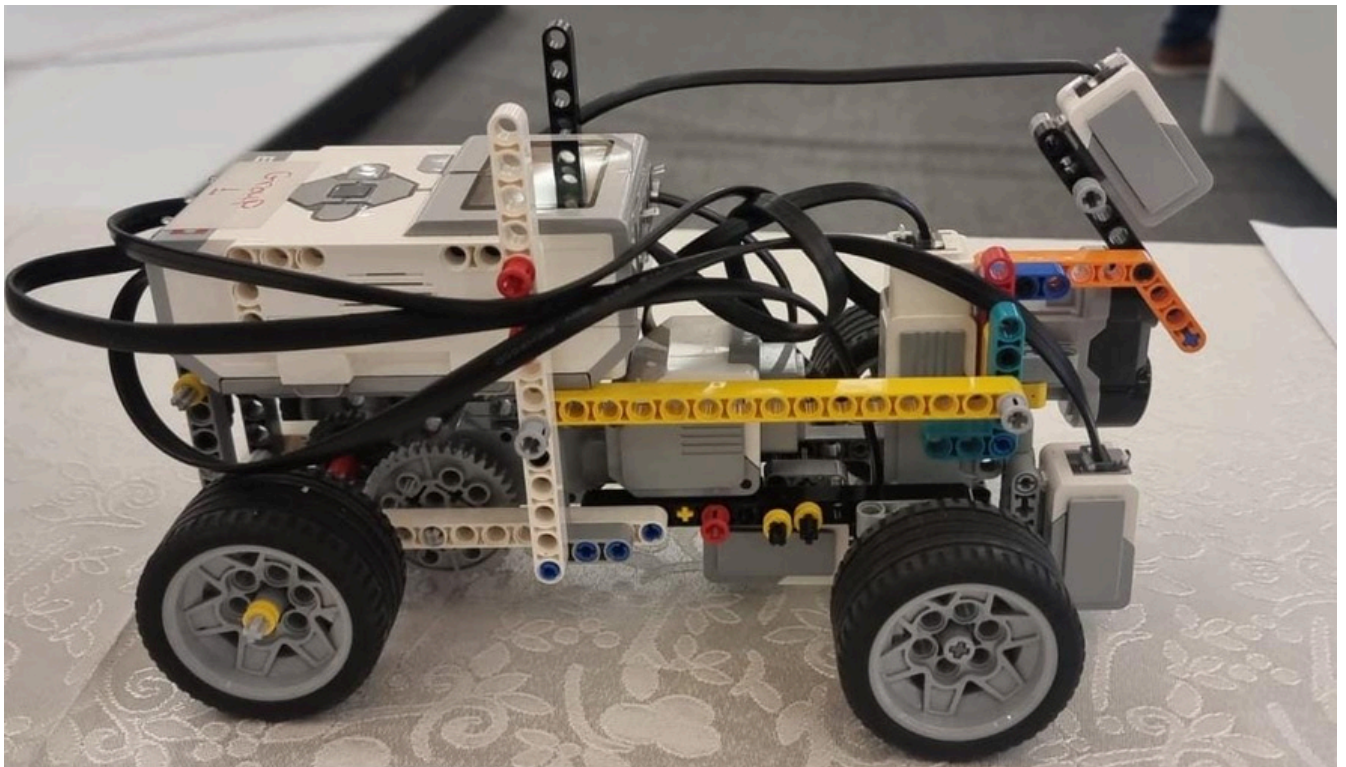
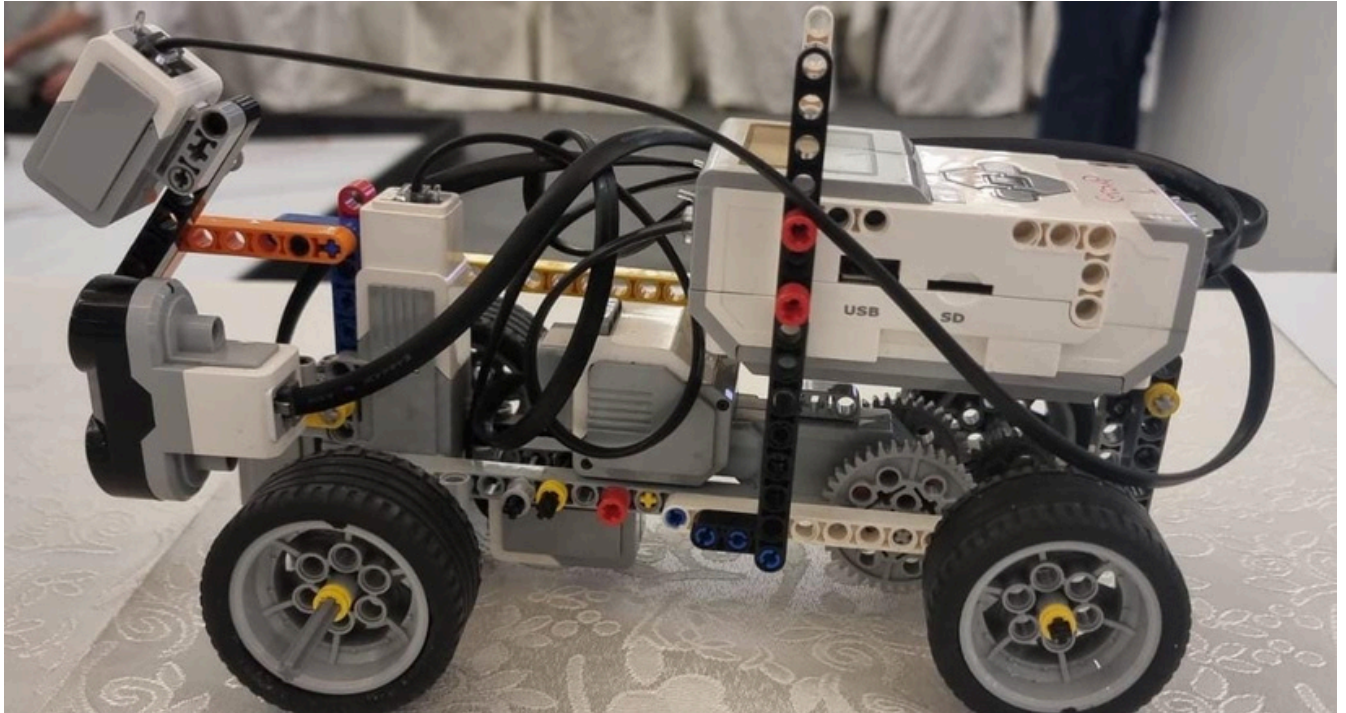
1-One team photo:

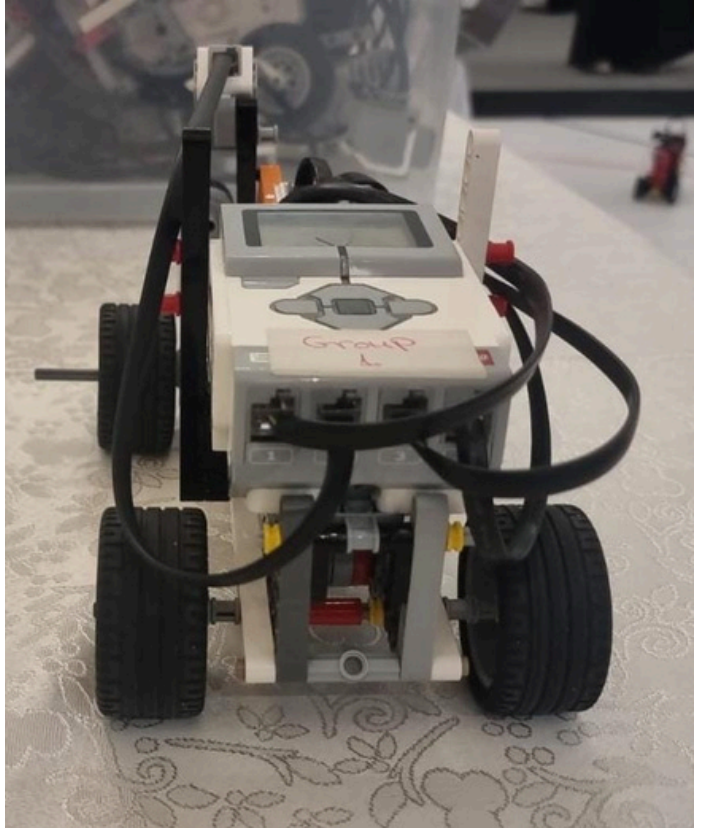
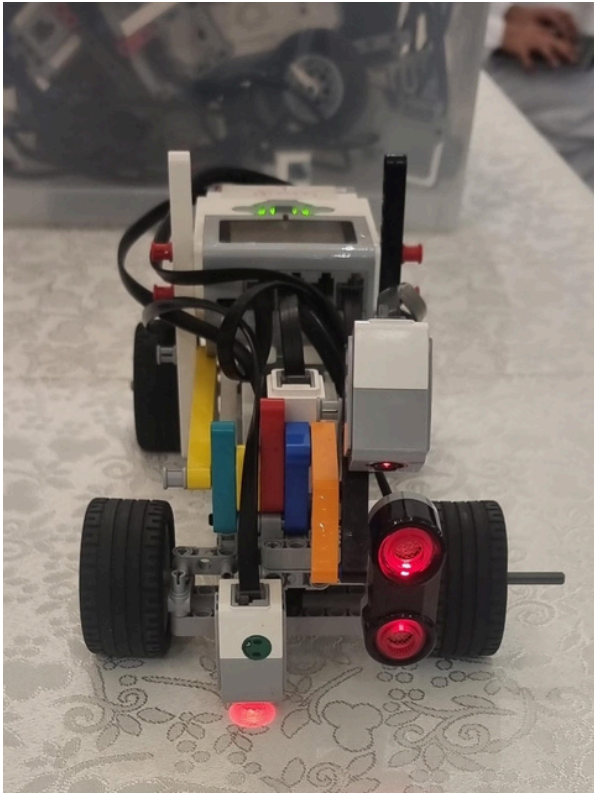


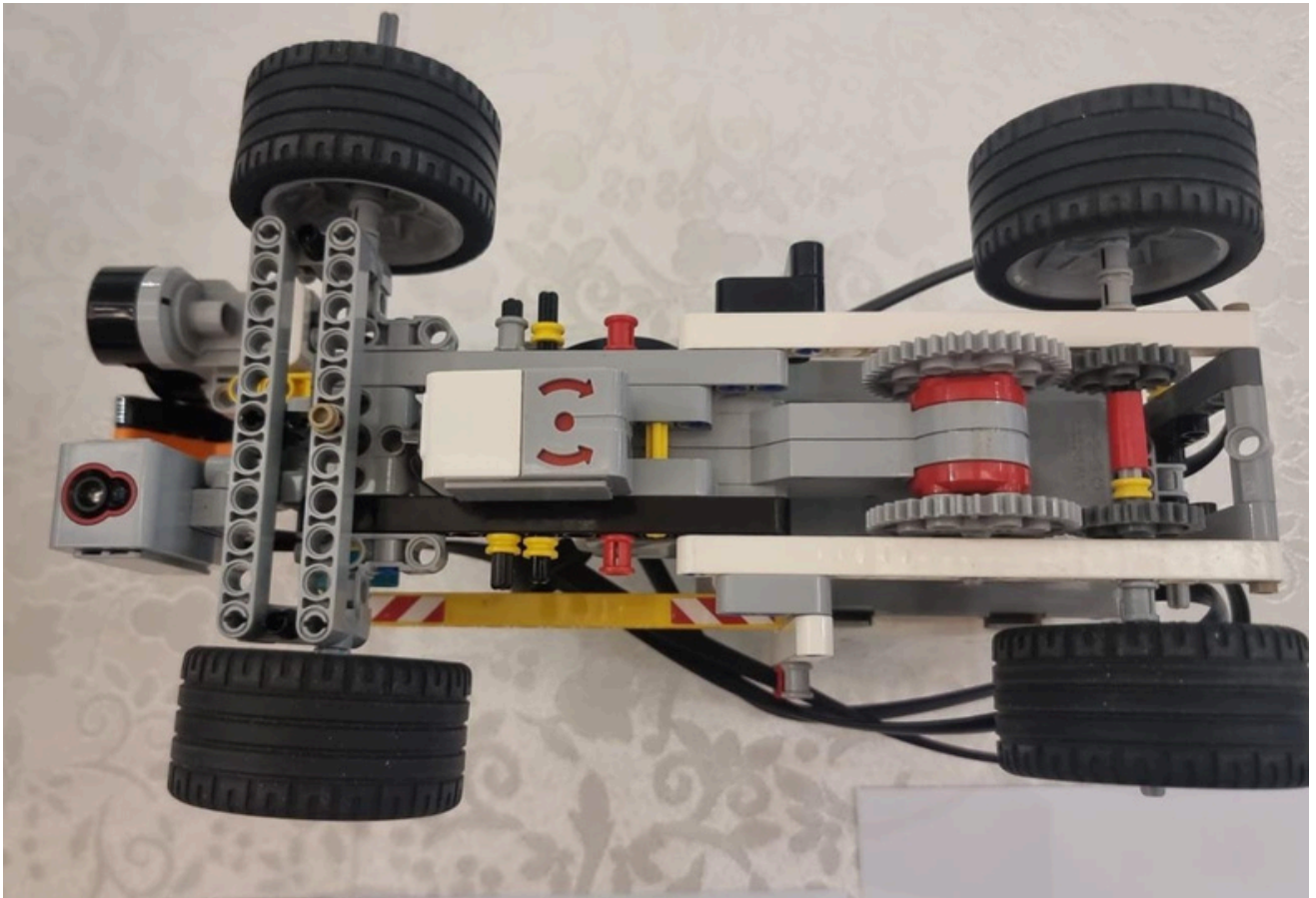
Reval Batobara Gr 12

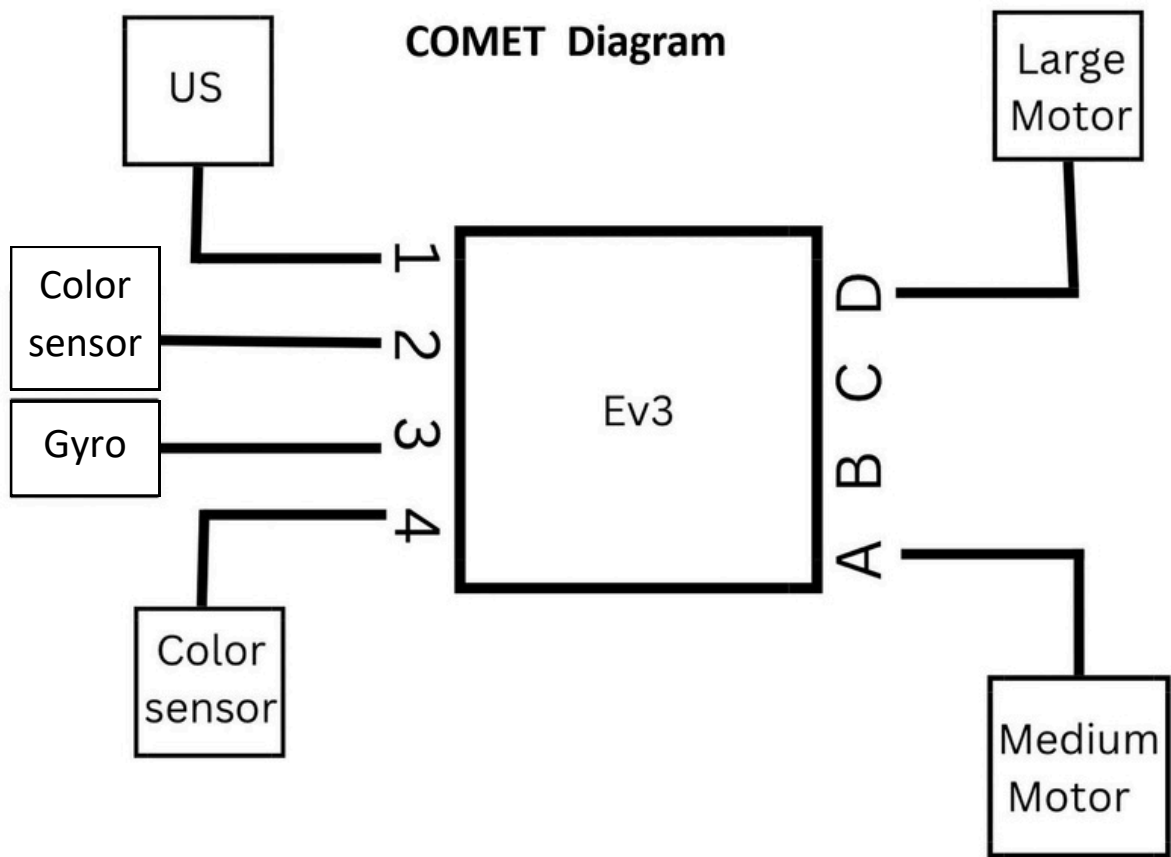
Lamar AlGhamdi Gr 12

2- Six Robot photos:









Programming:

Clockwise & anticlockwise

```
Connect
1 from spike import PrimeHub, LightMatrix, Button, StatusLight, ForceSensor, MotionSensor, Speaker, ColorSensor, App, DistanceSensor, Motor, MotorPair
2 from spike.control import wait_for_seconds, wait_until, Timer
3 from math import *
4
5 Driving = Motor ("A")
6 Steering = Motor ("C")
7 C1 = ColorSensor ("E")
8 D1 = DistanceSensor ("B")
9 D2 = DistanceSensor ("F")
10 Error = 0
11 Last_error = 0
12 Kp = 0.3
13 Kd = 1
14 number_of_rounds = 3
15 number_of_sides = 4
16 direction = 1
17
18 for i in range(number_of_rounds):
19     for j in range(number_of_sides):
20         while True:
21             Driving.run_at_power(60)
22             Error = D1.get_distance_cm() - D2.get_distance_cm()
23             U = Error*Kp + (Last_error - Error)*Kd
24             U = Error*Kp + (Last_error - Error)*Kd
```

 Console

```
Connect
17
18 for i in range(number_of_rounds):
19     for j in range(number_of_sides):
20         while True:
21             Driving.run_at_power(60)
22             Error = D1.get_distance_cm() - D2.get_distance_cm()
23             U = Error*Kp + (Last_error - Error)*Kd
24             steering.run_for_degrees(U)
25             if C1.ColorSensor.is == 'red':
26                 direction = 1
27                 Driving.stop()
28                 break
29             else if C1.ColorSensor.is == 'blue':
30                 direction = -1
31                 Driving.stop()
32                 break
33             Steering.run_for_degrees(direction*30, 60)
34             Driving.run_for_degrees(60, 80)
35             Steering.run_for_degrees(-1*direction*30, 60)
```

 Console

GitHub links:

<https://github.com/Noga1171/AutoX-23-final.git>





تقييم مهندسي المستقبل:

جدول النقاط :

الجولة : 1st

1372

فريق رقم :

Requirements	Point value	Total available
Driving		
The vehicle drives from a section in the match driving direction. This is applicable for the starting section, but not applicable for the finish section and other section next after it.	1	24
The vehicle drives a full lap. 8 sections were passed successfully in the match driving direction. The starting section is included in the eight sections for the first lap. The lap is considered as completed if the vehicle completely drives out of the last (corner) section in the lap. So, the vehicle is able to start moving in the opposite direction after this and the lap will be still taken into account.	1	3
After the completion of three laps the vehicle stopped in the finish section.	4	4
The match was stopped before the vehicle completed three laps and the traffic signs were not moved and knocked down in those sections which the vehicle passed through completely. Applicable only for final matches.	4	4
After the completion of three laps the traffic signs were not moved and knocked down. Applicable only for final matches.	8	8
The team performed repairing actions by taking the robot out of the field even if the actions were not successful.	Total match points divided by factor 2	
Vehicle documentation		
Team photos	1	1
6 vehicle photos	1	1
URL to YouTube	2	2
A schematic diagram the electromechanical components	4	4
GitHub code	2	2

الوقت :

36

المجموع للنقاط :

توقيع قائد



تقييم مهندسي المستقبل:

جدول النقاط :

الجولة : 2nd

1372

فريق رقم :

Requirements	Point value	Total available
Driving		
The vehicle drives from a section in the match driving direction. This is applicable for the starting section, but not applicable for the finish section and other section next after it.	1	24
The vehicle drives a full lap. 8 sections were passed successfully in the match driving direction. The starting section is included in the eight sections for the first lap. The lap is considered as completed if the vehicle completely drives out of the last (corner) section in the lap. So, the vehicle is able to start moving in the opposite direction after this and the lap will be still taken into account.	1	3
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After the completion of three laps the traffic signs were not moved and knocked down. Applicable only for final matches.	8	8
The team performed repairing actions by taking the robot out of the field even if the actions were not successful.	Total match points divided by factor 2	
Vehicle documentation		
Team photos	1	1
6 vehicle photos	1	1
URL to YouTube	2	2
A schematic diagram the electromechanical components	4	4
GitHub code	2	2

الوقت :

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المجموع للنقاط :

توقيع قائد