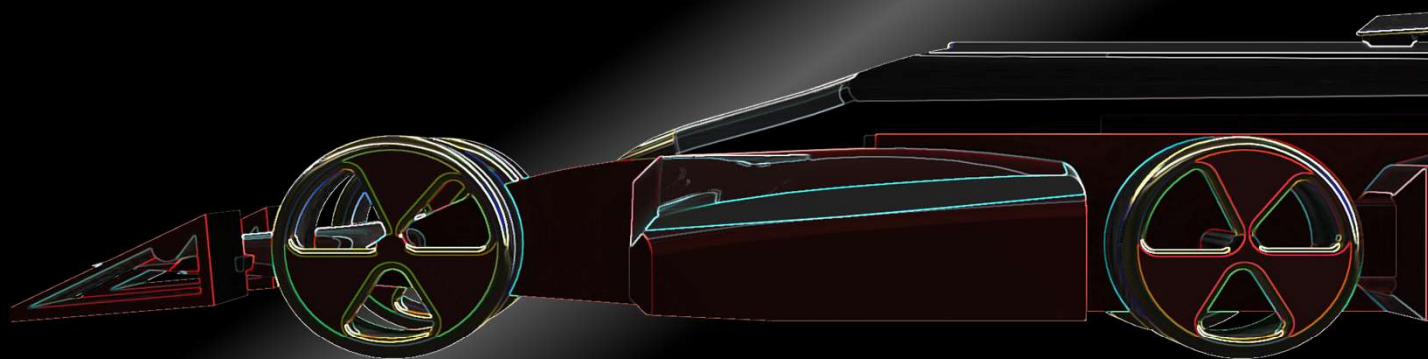


< ENTERPRISE >

< PORTFOLIO >



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ABOUT US / THE TEAM

MANUFACTURING

ENGINEER

GAURAV
GOSWAMI

GRAPHIC
DESIGNER

ADVITA GAUTAM

TEAM MANAGER

VANSH MALANI

DESIGN ENGINEER

AARYAN GOYAL

SPONSORSHIP

MANAGER

ADYANT
AWASTHI



TEAM IDENTITY

Identity

Detail is evident in the way in which we established our corporate identity from the start. Team colours and acceptable fonts and logos to be used on light or dark backgrounds.

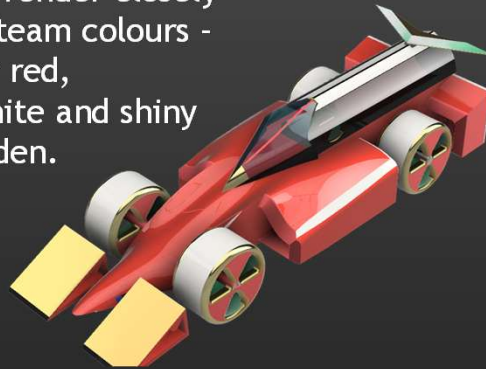
logo

Our logo is simple yet distinctive and effective to encourage spectators and competitors to remember our name. Our logo highlights our name TEAM MOMENTA. The dark “M” and background represent our team colours. The logo was designed to look sleek and represent a racetrack, as shown by the sharpened letters.



CAR IDENTITY

Consistent with other applications of our corporate identity, our final car render closely reflects team colours - predator red, black, white and shiny light golden.



Team Uniform

Our competition uniforms were designed around three main factors - eye-catching, comfort, and climate. The shirts are made of polyester, which provides maximum comfort and no itching. The design promotes our team colours, predator red, black and white to stand out in the crowd.

Team Moto

Our motto - “Always In A Moment” was chosen because we believe that with collaboration and commitment, innovation and imagination and a positive attitude, team ‘MOMENTA’ will unleash its potential energy on all the stages. Our goal is to be the first collaborated team to reach the World Finals.



MANAGEMENT & COMMUNICATION

Project Management

An effective project management strategy was developed to manage the constraints of communicating in different time zones; the range of resources available to both teams; the scope of the task; and the fact that our two teams included students with a variety of knowledge and skills. Our team structure identified the special talents of members. To help achieve our aim to win the world title we used to make every thing as a task and effectively manage time, scope, budget and the challenge of communication.

Scope

At the start of our campaign for the 'F1 in Schools. We held this meeting to scope the task ahead and discuss the positives, negatives and issues (PNI) including

timelines, budgets, roles and responsibilities, marketing strategies, resources, risks and opportunities for collaboration.



Time Management

We planned car design and manufacture; graphics including a team; sponsors; uniforms; marketing strategies; portfolio; and the verbal presentation. The final design of the car had to be agreed by a set milestone to avoid delays in manufacturing, completion of renders and the portfolio. One of the many challenges we faced as a collaborated team was the need to be flexible as we faced events, such as school holidays, which impacted on the timeframe.

Communication

Communication is very important in this or we can say communication is the key to a successful collaborated team. In order to achieve this, many communication methods were used within schools including email, telephone, video calling, SMS, regular meetings during and after school ,and arranging house meeting or outside meeting. We also use Facebook because Facebook, allowed team members to create a fan page to help promote and advertise our team, which attracted many 'likes'.



GRAPHIC DESIGNING & MARKETING

Logo Designing

Designing a logo is a very difficult task . Many logos are rejected given below-



The reasons for rejecting logos are : not suitable for team, colours , theme and team design . We faced many difficulties while designing a logo like which software we have to use , which background and colour.



Car Designing

Designing a car is also a very difficult task many problems we have faced like a puzzle.

We also faced many difficulties while understanding aerodynamics.

While testing the car output of aerodynamic result is not so good we take lot of time to understand what problem is or how to solve this.



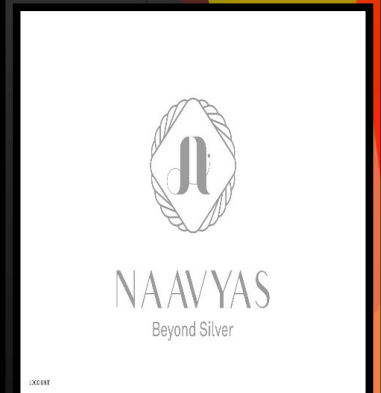
Marketing

Our team brainstormed different ideas to develop creative and effective activities to promote our team and ensure a 'return on investment' for our sponsor

To encourage spectators/competitors to visit our display, we developed a survey that seeks feedback on our display area. The questions align with the marking criteria so it enables us to obtain valuable feedback. Those who complete the survey, receive a free MOMENTA batch These highly visible things promote our team as when they are worn, our name and logo are featured at the championships - perhaps even worn by other teams! Another marketing strategy is to the QR codes of our team with links to our web address such as facebook ,Instagram ,twitter ,etc. For anyone interested in our team, newsletters were regularly emailed to our supporters.



SPONSORS



CAR DESIGN & DEVELOPMENT

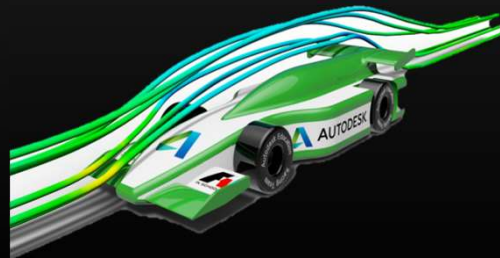
Design of car

As a team MOMENTA brought together to innovative team with very different concepts from their previous competitions. The challenge for the team was to select the best concept to represent MOMENTA at the World Finals. Another challenge was to select between the competing design. The process used to select the final car concept was based on the marking criteria for the competition. This included:

- Full compliance with competition rules;
- Strong design processes and analysis;
- Robust design unlikely to break during extensive racing; and
- Fastest average times during track testing.

Concept of Car

- Focus on reduced cross-sectional area and drag coefficient.
- Construction templates record all design decisions and measurable improvements.
- Developed and tested four concept cars and various body elements.
- Tested variations in the body height, side pods, rear skirt, nose and canister cones, central channel and under body channels.



- Focus on raising the centre of gravity to meet the thrust plane.
- Reduced car bulk from National car to reduce drag force.
- Unique design with potential innovation points.



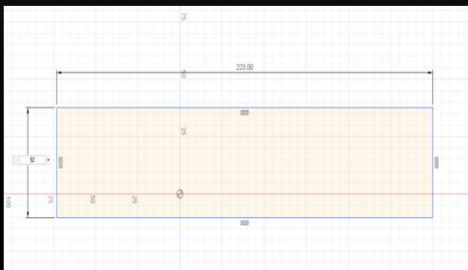
Concept Car A is based on fighter planes because they are very fast and in matter of aerodynamic body also.



CAR DESIGN & DEVELOPMENT

Design work

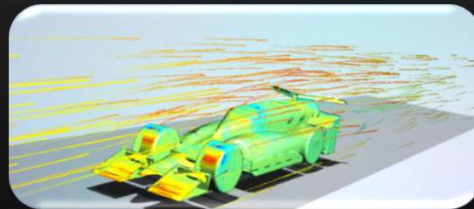
At first we done some paper work
To know what the design should be like.
We had many difficulties in finalising the design. By taking the concept of aeroplane we got to know that the speed is important component for a car So to increase the speed and to reduce the drag force we needed to design the car with aerodynamics.



Design process

In design work drag force is an important component Drag force is the single most reactive force that resists forward motion in an F1 car.

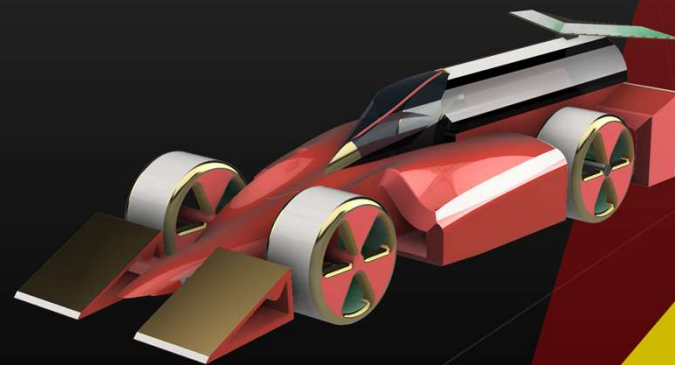
Drag force is a function of air density and the car's drag coefficient, cross sectional area and its velocity.



We though that if the car needs to be fast it should be light in weight and should have less drag force which is more important for a car's speed.

Final Evalution

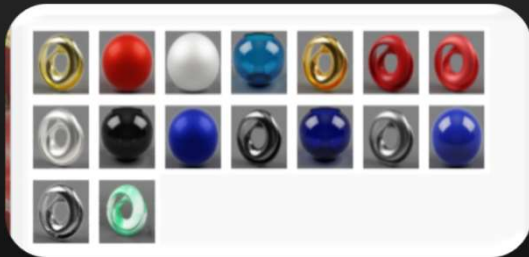
The incremental design process allowed our design engineers to clearly justify the selection of body elements, build on improvements and accurately record the findings to support their decisions.



MANUFACTURING OF CAR

Appearance

After sanding the car to make the surfaces smooth and to meet the specifications, we were assisted by professional painter. By this we gained the knowledge of how to achieve a professional and high quality finish.



Manufacturing

We have manufactured our car body through a CNC machine, which was provided by Times of Sports. This let us cut our car accurately and as per our given design. We had made the design on Autodesk Fusion 360 - the most useful CAD type software.

CNC Machine Tools



3D Printed Component

We as a team believed that the wheels are one of the most crucial components of the car as speed and aerodynamics are dependent on the wheels. The nose and the wings are also very important components to minimize the drag.

About CNC Machine

CNC (Computer Numerical Control) Machines is a process used in the manufacturing sector that involves the use of computers to control machine tools.

Tools that can be controlled in this manner include lathes, mills, routers and grinders. With CNC machining, the computer can control exact positioning and velocity. CNC machining is used in the manufacturing of both metal and plastic parts.



ORTHOGRAPHIC DRAWING

