IMMORTAL

BORN TO WIN

Designing and engineering portfolio

F1 IN SCHOOLS™

Introduction

Cover page

Introduction

Design Concept

Use of Computer

Use of CNC

Manufacturing and Assembling

Research and Development

Testing

Orthogonals

Orthogonals

The End

About us

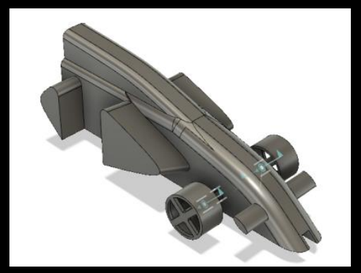
Our team is IMMORTAL which means that the one which never dies .

We are the students of Jaipuria schools Banaras Babatpur .we have taken part in F1 in schools which is really very good and we have learned many new things from this as it is not only about making the car and racing but also about ganing confident and getting some innovative ideas which is very useful for our future .

Design concept

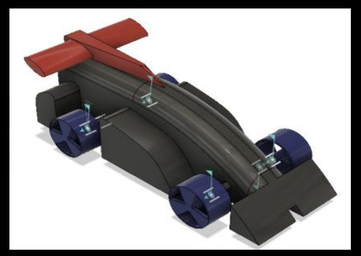
Sshreshath Jaiswal

As a design engineer I have faced much difficulty in making the model of car and I have taken the help of internet , our team manager helped me a lot.



Our first design

We have not paid much attention towards this as this model was not aerodynamically perfect.



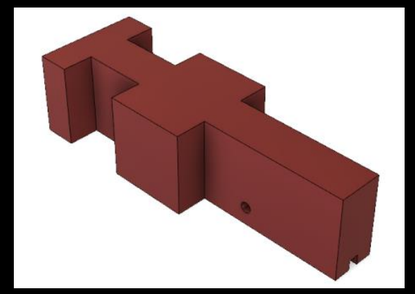
Our second design

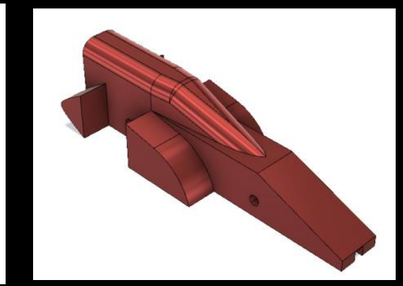
This is the design which is overweight and also had some faults in it so we have cancel this model.

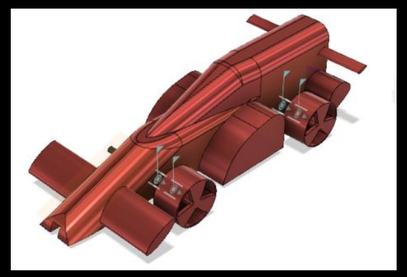
Wheels

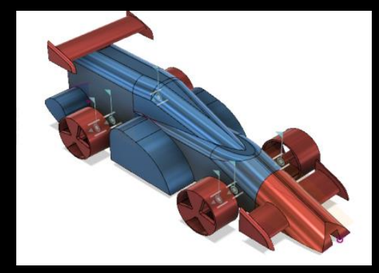
The wheels are hollow and we have made this model by seeing the sign of Audi. This model has been presented by our manufacturing engineer.

Moving towards new design









After making different cars we have reached to our final design there is a great contribution of the team members in making the model.

While making the final model I have modified it many times and after long hours of hard work I had finally made the final model.

Wings

Wings are specially designed in these shapes so that tey can cut the flow of air easily.

Use of computer

Use of computer for designing the car

Car Designing

For designing the car the software is used named **autodesk fusion 360** which is a 3D designing software in which any 3D figures can be drawn .

Car Testing

For testing the cat speed , velocity etc the software which is used is also the product of autodesk named **flow design** .

Use of computer for uniform designing

Logo designing

For designing the logo the software which is used is **adobe photoshop** and **paint** using this two software and by taking the help of internet we are able to make the logo of our team.

Uniform Designing

Designing the uniform is one of the most important task for us designing this we have used software **adobe cs6**.

Use of CNC in car manufacturing

A **CNC**, or computer numerical control **machine** is a high precision tool that's computer-controlled and makes repeated, accurate movements. It **does** so by taking computer-generated code and converting it with software to electrical signals. ... Quite expensive, **CNC machines** can **do** almost anything you need them to **do**.

When the model is send in the form of **STL** file then it takes it and convert it into electrical signals and hence manufacture it.

"**Success** is not final; failure is not fatal: It is the courage to continue that counts."

Manufacturing and assembly


Abhijeet Maurya

As a manufacturing engineer I have all assembled the car my team members also helped me in doing so. It was my first time when I assembled any car.

Assembling the car

As I got the car it was totally separated its wings, axles, and wheels are separated from each other.

The material which is used for wheels are the PLA material.

Wings are also made up of PLA material.

Painting the car

The colour which is used for the painting of the car is the primer.

It is of Red and Blue colour primer which we have used for painting our car .

Research and Development

Research

Lots of research had been done on the basic of this project. This is a big challenge for us as it was ours first time when we had participated in this type of a stem based challenge.

Development

On the basic of the research we have developed our project in order to make that strong and perfect.

Development is needed in every field and it can be done through more practice and research.

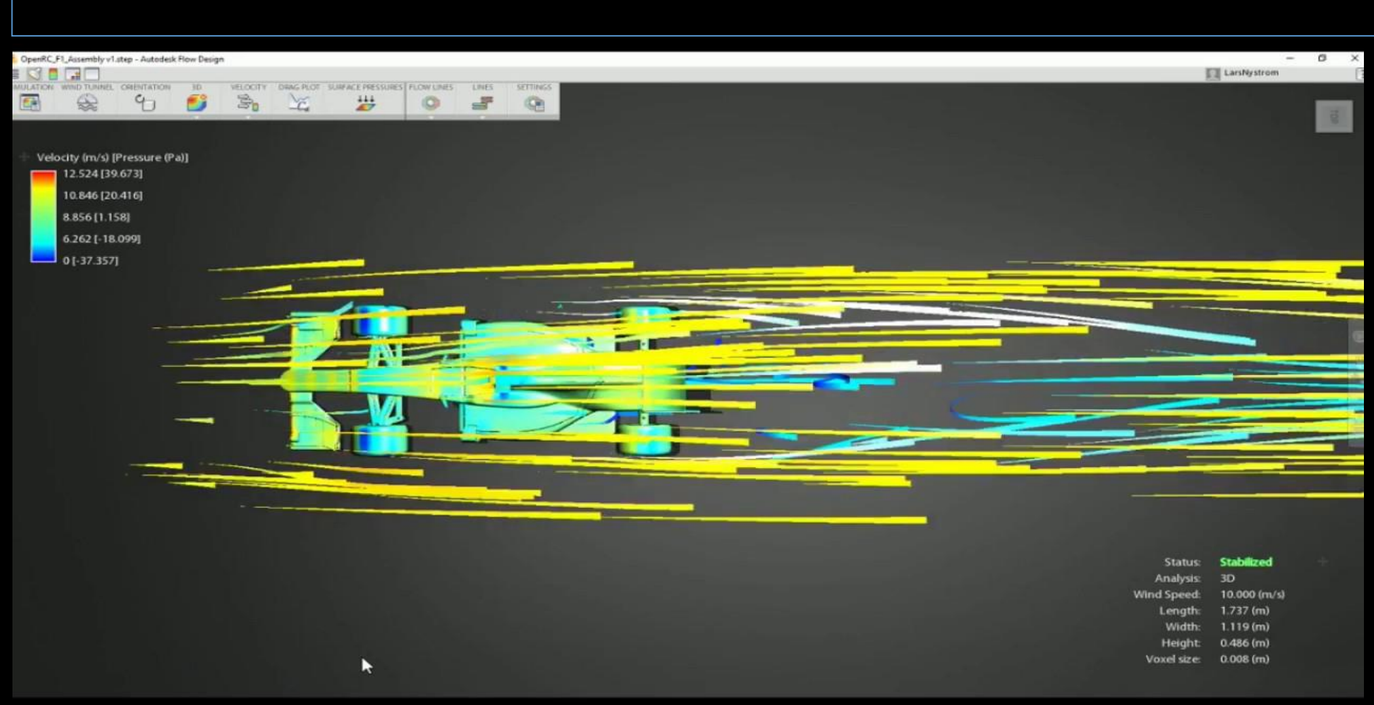
Testing

Virtual Testing

Testing with Software

We have used Autodesk Flow Design Software to test the car speed, velocity etc.

After designing the car we have saved it in STL file and open it in the Software then set the wind speed and others and tested the car.



Testing is going on

Real Testing

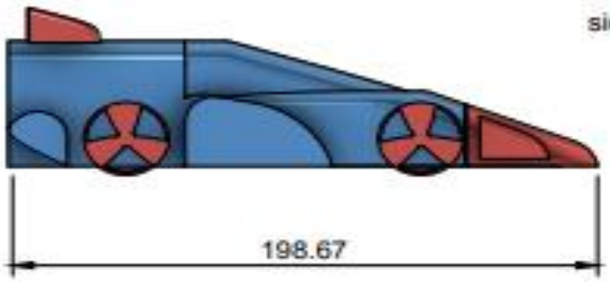
Testing with wind tunnel and Track

It was too early when the testing was not started we wanted to test our car speed so we used our Indian Jugaddu mind and made a small track and used a fan to adjust the wind and as we have no cartridges we have a toy catapult to apply the constant force on the car.

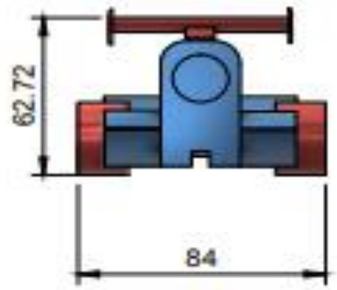
This is our track

Orthogonals

side view

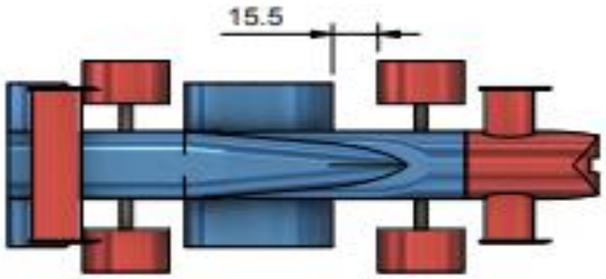


rear view



isometric view

plane view



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Extrude view

This is the extrude view