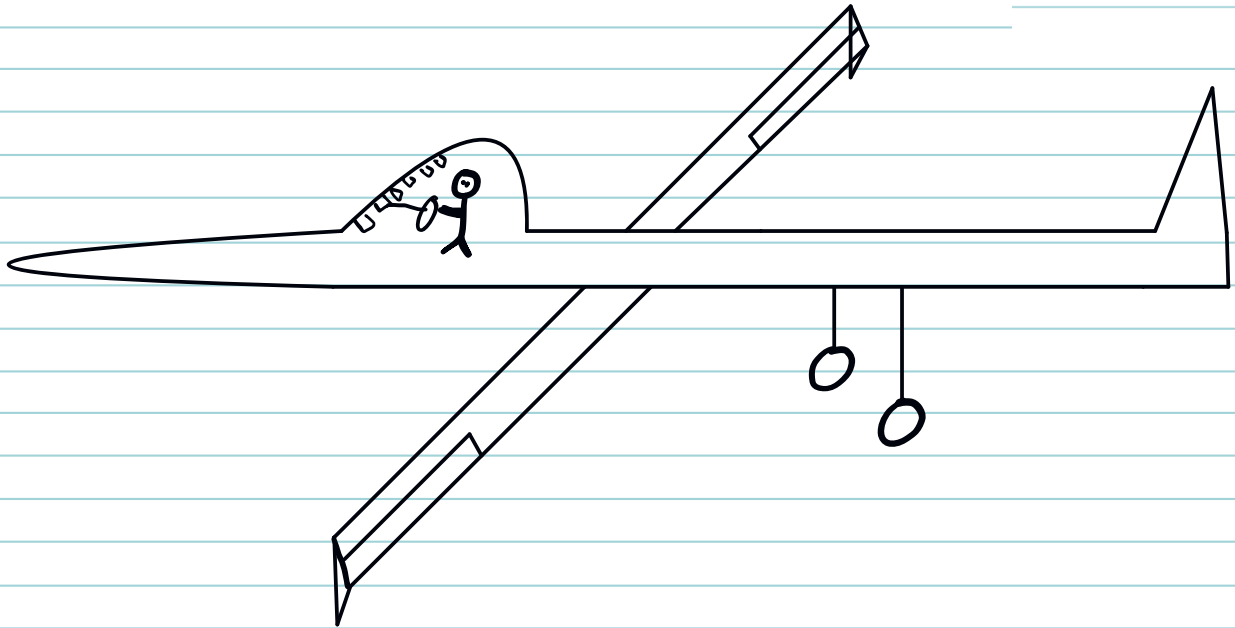


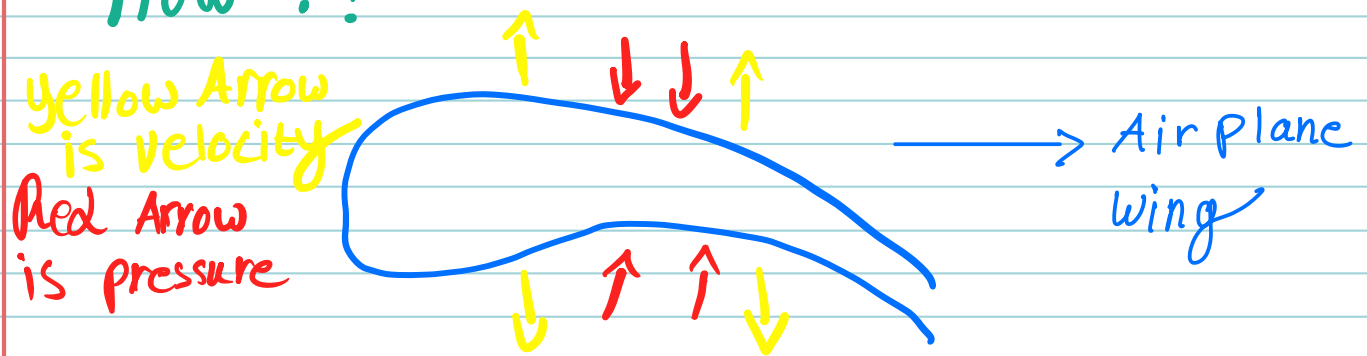
# How do Airplane Fly ?

Done by. Eng.MKR



- Air plane is moving on the ground using it's engine to accelerate
- We need to know the relationship between the velocity ( $v$ ) and the Pressure ( $P$ ) which is basically inversely proportional  $v \propto \frac{1}{P}$  which is mean that when we increase the velocity the pressure decrease
- After accelerating on the Airport lane we need to play with pressures with the help of velocity in Air to have a lifting Force that will carry the Air plane.

How ??

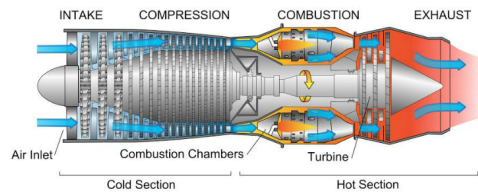


As we can see the Air plane wing is shaped in a special way that will increase the **velocity** of Air on the upper part and decrease the **velocity** on the lower part. So as we discussed earlier the relation between the **velocity** and the **Pressure** there will be a difference in **pressure** on the upper part will be **low pressure** and on the lower part will be **high pressure** and hence this will produce a **lift force** on the wing of the plane.

### Summary

So, Air plane is moving using the jet engines to overcome the drag force and the friction force coming from the tires and airport lane. The wings is moving to change velocities and then pressures will be changed this will cause a lift force then the plane will fly.

# After flying



After flying the plane will continue its motion with the help of engines mainly but also using wings, flaps and slats, aileron, and at the rear part of the plane the rudder and elevator to overcome the drag force. Till it reaches the level of flight there will be no accelerating or changing in altitude the drag will be equal to the thrust force.