For stability analysis 3 constraints were iterated and finally the dimensions that gives a Static margin of 12% was selected for a stable flight.

## Final Plane Dimensions were as follows:

PLANE									
span	chord	Area	Cl	Alpha	Lift(Kg)	A.R	Xcg	Xnp	SM
151	19	2869	0.7616	5	4.424687	7.947368	7.8	10.1	0.12105
HORIZON	TAL TAIL								
Sh	Ch	Α	Leading D	Lh	Vh	C/4			
50	15	750	46	42.95	0.590936	4.75			
VERTICAL	TAIL								
Sv	Cv	A	Leading D	Lv	Vv				
12	15	180	35	31.95	0.013275				



- CFD analysis in Ansys Fluent is performed to demonstrate the real world physics applied on the aircraft and validate our XFLR results.
- The results show that there is a flow separation at 16.5 cm from the leading edge on the wing while at 12cm from the leading edge on the tail.

