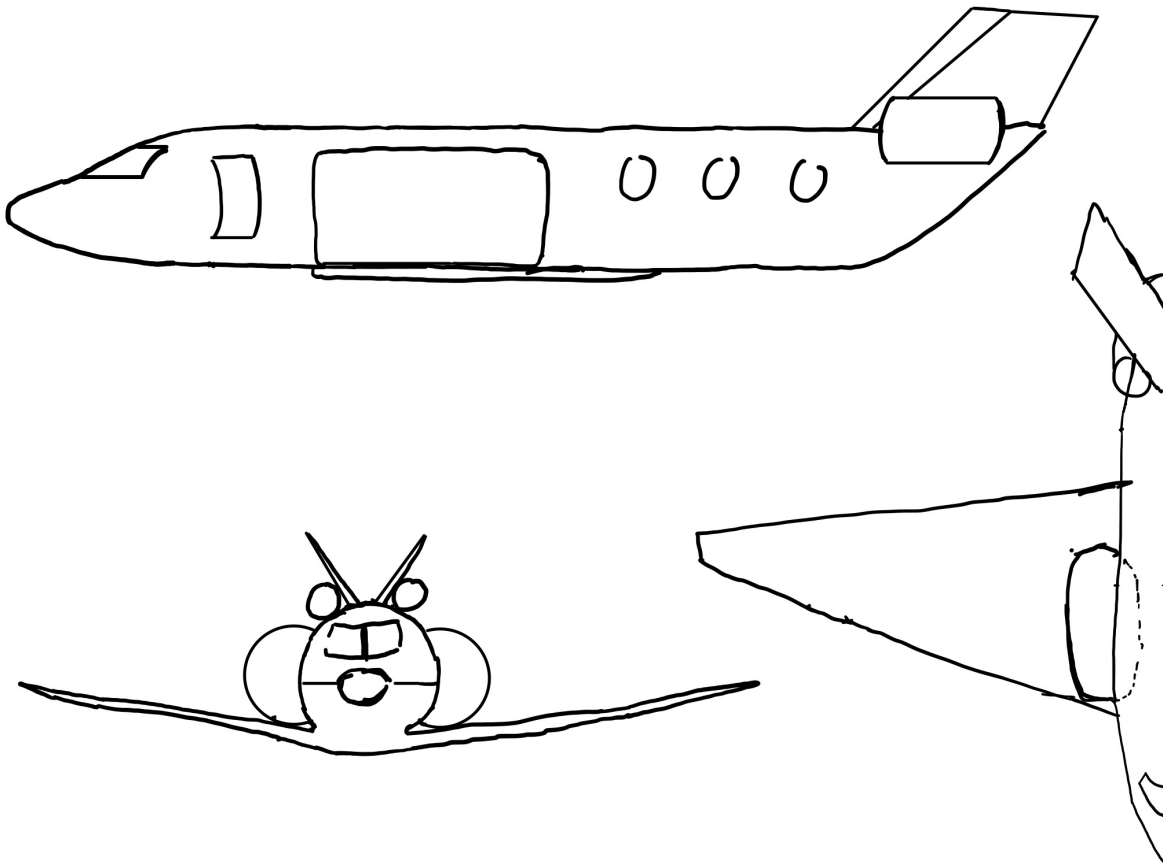


Design task 1 - Revised

▼ Class	MMS236
📅 Date	@September 18, 2024
💬 Comments	Revised Conceptual Sketch (DT1)

Sketch



Assumptions

Parameter	Values	Unit
Wingspan	16.5	m
MAC	2	m
Swt/Srf	7	-
Fuselage L	16	m
Fuselage D	2	m
Cabin L	4	m

Aerodynamics

Parameter	Value
L/D_max	16.83
Aspect Ratio (AR_wet)	8.25

Take-off Weight

Parameter	Value	Unit
Takeoff Weight (W0)	4911.69	kg
Empty Weight Fraction (EWF)	0.8446	-
Empty Weight (EW)	4148.36	kg

Fuel Information

Parameter	Value	Unit
Fuel Mass	517.87	kg
Fuel Fraction	0.1054	-

Tank Information

Parameter	Value	Unit
Tank Penalty (GI)	0.3678	-

Tank Mass	890.26	Kg
Tank Volume	7.29	m ³
Inner Diameter	1.46	m
Inner Length	2.19	m
Outer Diameter	1.66	m
Outer Length	2.39	m
Outer Tank Volume	5.15	m ³