

# CC Assignment #01

Name: M. Awais Tariq  
Reg: L1F22BSCS1176  
Section: G-01  
Date: 23/10/25

## ① Language Overview

I have named my mini C++ like language **MavLang** which stands for **Maverick** language. The name is inspired by the Movie **Top Gun: Maverick**, which is about confidence, speed and perfection in mission critical environment, and my personal favorite.

### Theme Explanation:-

The theme of **MavLang** is based on aviation & mission control. Every part of the syntax feel like giving a flight command or executing a given mission.

## Purpose:-

Just like real aircrafts systems and robotics software, **MavLang** is to simulate command based or mission-critical tasks.

In short **MavLang** feels like flying.

## ⇒ ② Keywords:-

Keyword.	Meaning / Equivalent.	Example usage.
launch	Start program / Main function	launch { ... }
target	variable declaration int type	target speed = 900;
lock	If condition (like if)	lock (altitude > 1000)
elsejet	Else condition	elsejet { ... }
loopback	For loop	loopback (i=0; i<5; i++)
runway	While loop	runway (fuel > 0)
mission	Function definition	mission calculateSpeed() { ... }
engage	Call function	engage calculateSpeed()
eject	Exit / break	eject;
afterburn	increases variable like ++	speed afterburn;
stall	Stop execution temp. like pause.	stall(5);
signal	print / output	signal "Mission Started";
readjet	Input / read data	readjet speed;
flightpath	Array or list	flightpath angles[10];
debrief	Return Statement	debrief results;
altitude	float type	altitude high = 9.0;
airspeed	String	airspeed aircraft = "too low"
charcode	Character	charcode At = 'S';
switch	bool type	switch A = I;

## ⇒ ③ Operators & Punctuations.

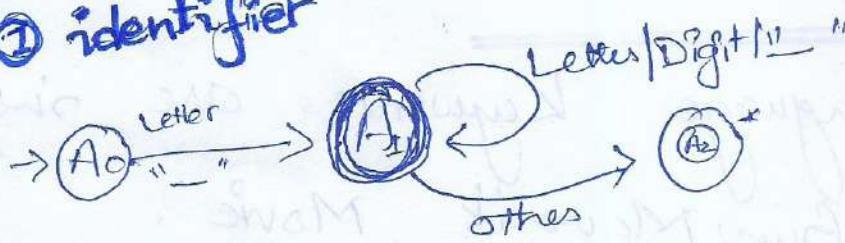
Category	Symbol	Description
Operator	+	Addition
Operator	-	Subtraction
Operator	*	Multiplication
Operator	/	Division
Operator	==	Comparison
Punctuation	{ }	Code Block Delimiter
Punctuation	;	End of Statement
Punctuation	( )	Expression Grouping

## ⇒ ④ Regular Expression.

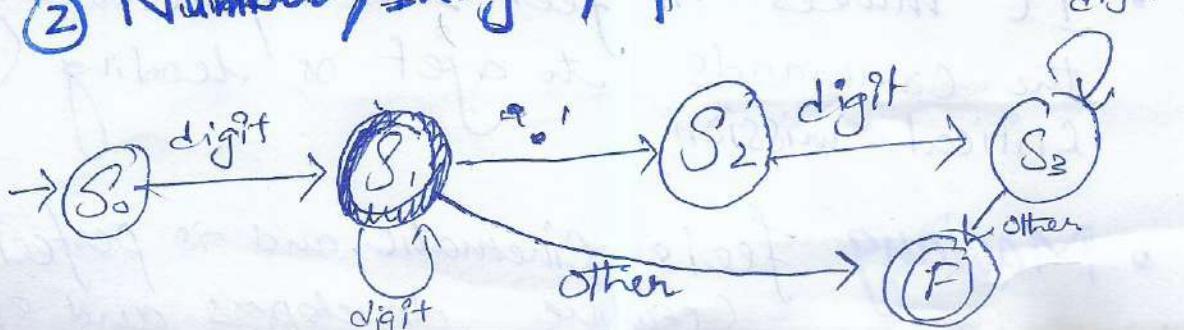
Token Type	Regular Expression	Example
Identifier	$[a-zA-Z][a-zA-Z0-9]^*$	Speed, Altitude
Integer	$[0-9]^+$	900
Float	$[0-9]^+ \cdot [0-9]^+$	123.45, 0.45
Keyword	"launch"	"lock"
Operator	"+"	-
String	<code>\\"[\\\""]^* \\\"</code>	"mission started"

## ⇒ ⑤ Finite Automata

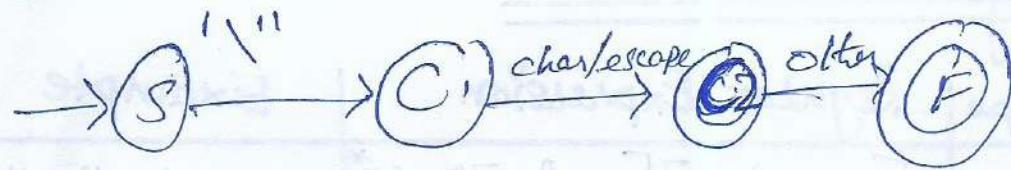
### ① identifier



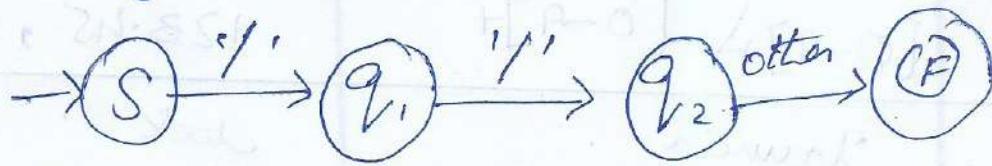
### ② Number / Integer / floats



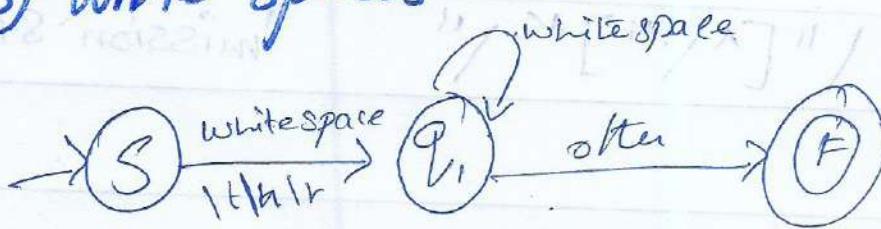
### ③ Character literals



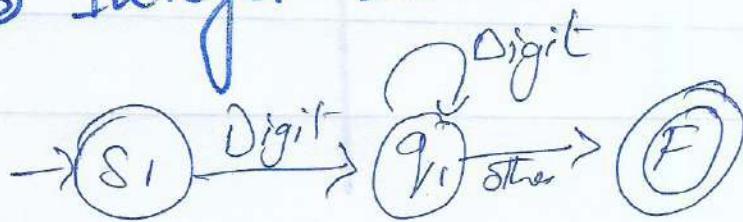
### ④ Single line Comment



### ⑤ White spaces



### ⑥ Integer literals



### ⑥ Explanation:-

- My language keywords are inspired by Top Gun: Maverick Movie.
- It makes it feel like you are giving the commands to a jet or leading a critical mission.
- Marvlang feels cinematic, and is perfect for creative developers and students.