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Section : A-  
Course : Compiler Construction  
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## "ASSIGNMENT 01"

### • Language Overview;

The name of my programming language is "Tech-Zubaan". It is inspired from Urdu language. Tech Zubaan is designed to make programming more accessible and intuitive for Urdu speaking communities.

The language aims to bridge the gap between natural Urdu language constructs and programming logic, creating a gentle learning experience for beginners while maintaining the power of modern programming paradigms. The syntax of this language includes the Urdu based keywords and identifiers.

### • keywords;

The unique keywords of my language are given below;

Keyword	Meaning	Example
yay	if	yay (age==12)
w rna	else	w rna yay (age>12)
Barbar	for	barbar (i=0, i<5 ; i++)
Dedo	return	Dedo -1
Darost	True	Dedo::Darost
Galat	false	Dedo:: Galat
Laina	input	Laina (number)
likho	printing	likho ("Salam")
Rakam	int	Rakam number = 10
Lafz	char	Lafz A = 'C'
rukO	break	rukO
khali	Void	khali function ()
yan	OR	age > 11 yan age == 11
Aur	And	age > 11 aur age == 11
Ashariya	float	Ashariya number = 10.1

## • Operators :

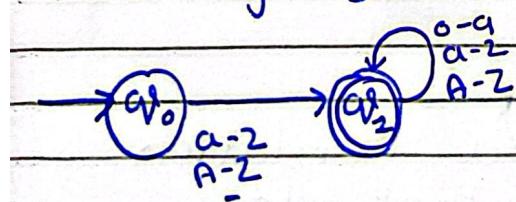
Category	Symbol	Description
operator	*	multiply
operator	+	addition
operator	-	substraction
operator	!	negation
operator	=	Assignment
operator	==	check
operator	>	is greater
operator	<	is lesser
Punctuation	( )	Parameter
Punctuation	;	Statement terminate
Punctuation	{ }	Block delimiters
operator	/	division

# Regular Expression;

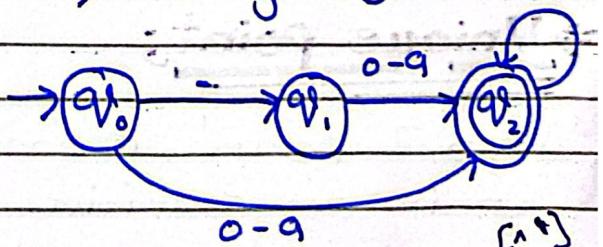
Token Type	R.E	Example
Identifier	$[-\text{a-}2 \text{ A-}2] [0-9 \text{ a-}2 \text{ A-}2]^*$	studentname
integer	$(-) ? [0-9]^+$	42
float	$(-) ? [0-9]^+ . [0-9]^+$	3.22
character	'[a-2 A-2]' [-0-9 a-2 A-2]*' OR '[^']*'	'Ali1' 'Anas'
keywords	keyword name itself	Rakam
operators	[+ - * ! = > < / ]	3/3
punctuation/symbol	[ ( ) { } ; ]	(Hi)
String	"[^"]*" . "	"Hello"

# Finite Automata;

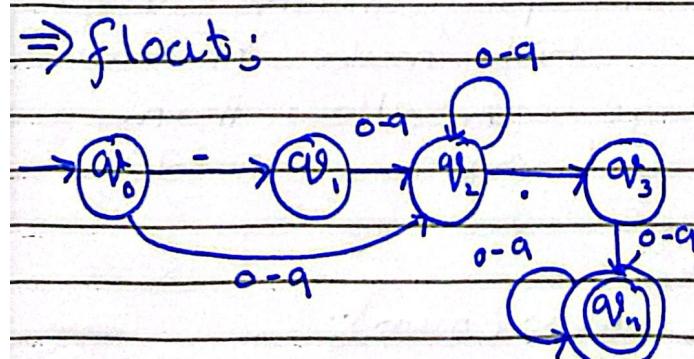
$\Rightarrow$  Identifier;



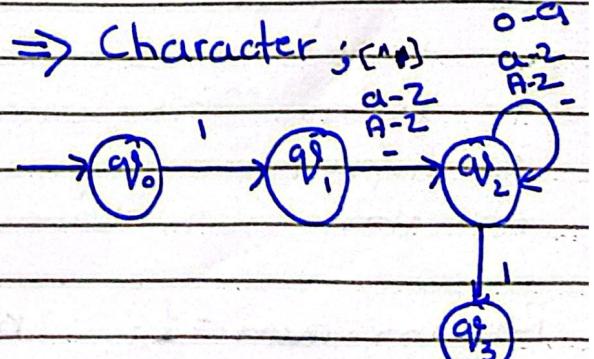
$\Rightarrow$  Integers;



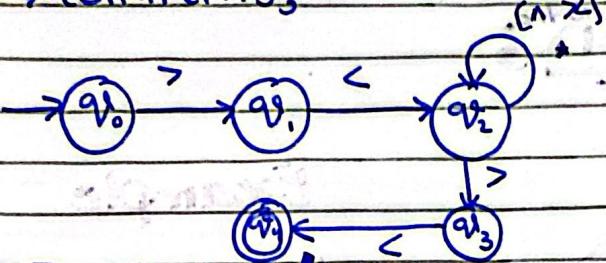
$\Rightarrow$  float;



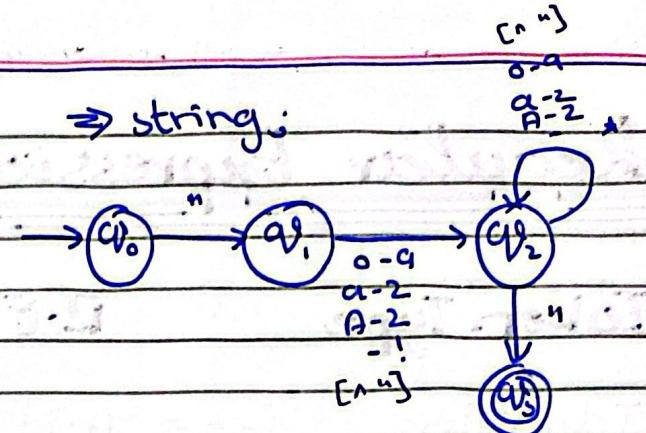
$\Rightarrow$  Character;



⇒ Comments;



⇒ strings;



## Explanation:

The keywords are selected from the Urdu language or vocabulary that naturally maps to programming concepts like;

Dedo = return, rukho = break

Each keyword was chosen to create an intuitive bridge between natural language thinking and computational thinking. The vocabulary comes from everyday Urdu that educated Urdu speakers immediately recognize, making it easy for them to understand.

## Unique points:

'Tech Zubaan' is not just a translation.

It is a cognitive bridge that allows Urdu speakers to learn programming concepts in their own language which make it easier to learn. This language can allow them to implement logics and express their skills in their own language.

Rakam num = 1; OR likho (num);