

Compiler Design Project Spring 2023

- Students are required to undertake a team with 2-3 students per team.
- You can choose any programming language for the project (GUI is a must).
- **Only one member** from each team will submit Documentation and code for the project on E-Learning.
- **Due dates for each phase:**
 - Phase 1: from 7/5/2023 to 9/5/2023 according to your labs slot.
 - Phase 2: from 14/5/2023 to 16/5/2023 according to your labs slot.
 - Phase 3: from 21/5/2023 to 23/5/2023 according to your labs slot.
- Prepare your documentation that contains the following:
 - Cover Page.
 - Introduction for each phase.
 - Screenshot for each phase (Try an example and show the result).
 - **Deadline to submit the documentation on E-learning is 26/5/2023.**

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Phase 1:

♠ Scanner:

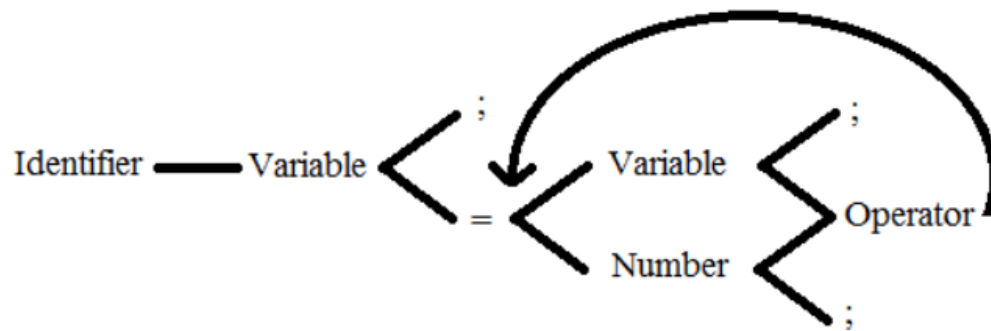
Identifiers	Symbols		Reserved Words
int	+	Operators	for
float	-		while
string	/		if
double	%		do
bool	*		return
char	(Open Bracket	break
)	Close Bracket	continue
	{	Open Curly Bracket	end
	}	Close Curly Bracket	
	,	Comma	
	;	Semicolon	
	&&	And	
		Or	
	<	Less than	
	>	Greater than	
	=	Equal	
	!	Not	
Variables			

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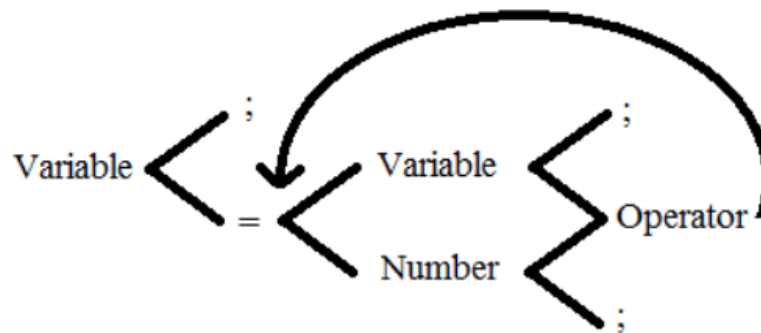
Phase 2:

♠ Semantic Analyzer (Checking Errors):

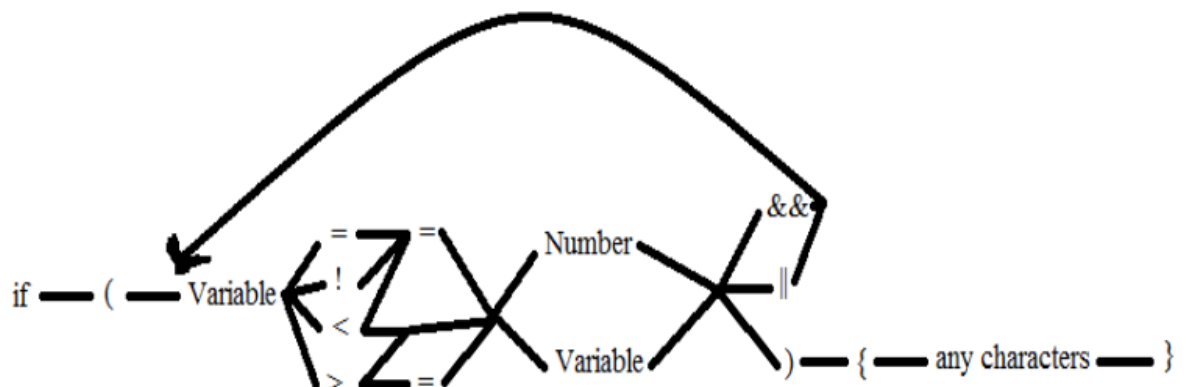
1.



2.



3.



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Phase 3:

♠ Memory

Design a memory to save variable's values.

For example

```
int x = 0 ;  
int y = 4 ;  
x = 2 * y ;
```

Memory Output

```
x=0  
y=4  
x=6
```