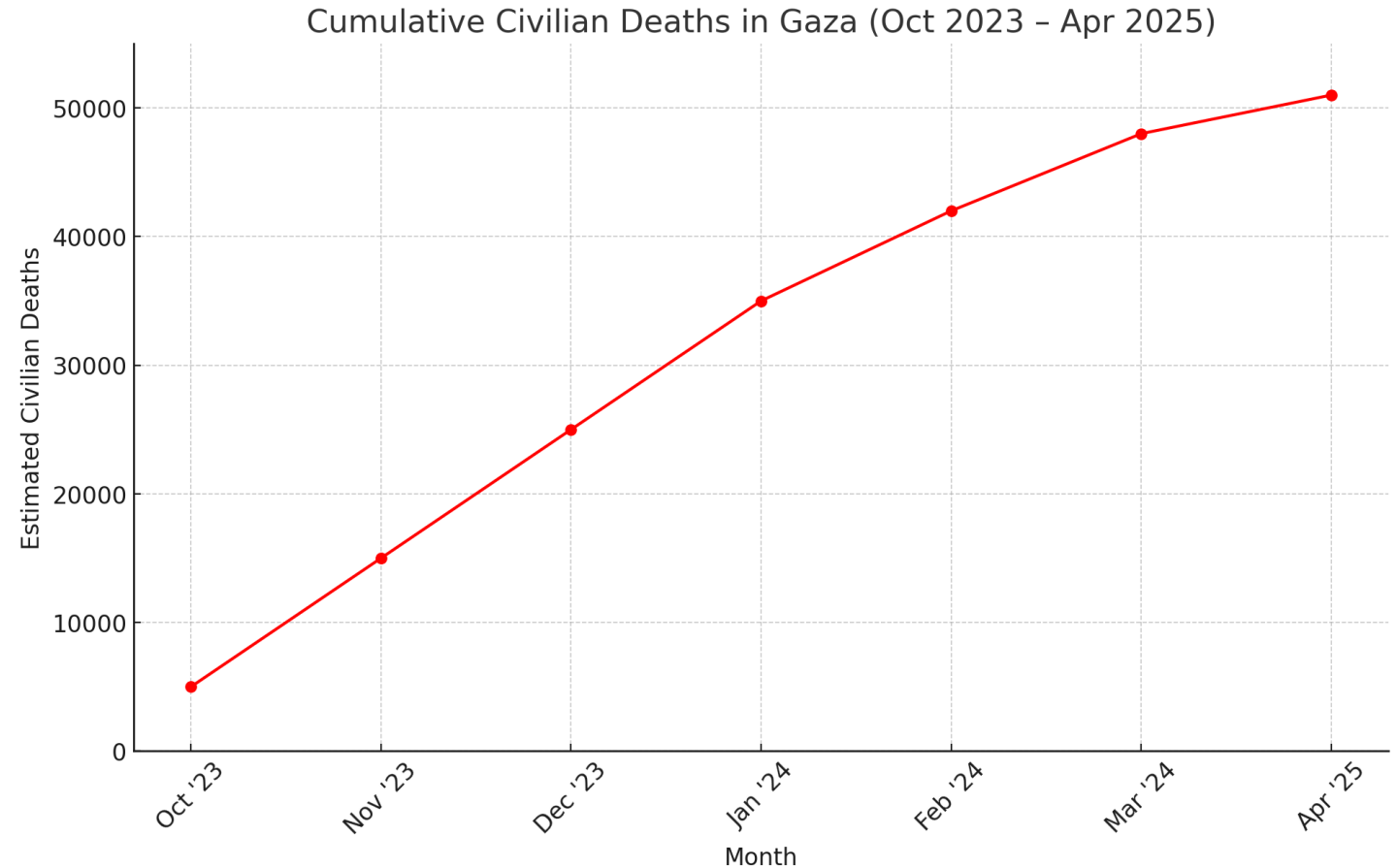


# TCL BEGINNER'S GUIDE

A SMOOTH START PART THREE

# DO YOU CARE FOR THEM?

- The Nazi Israeli occupation killed more that +100 child in one day
- **UNICEF and UNRWA:** Reports indicate that at least 15,613 children have been killed in Gaza as of late March 2025, with over 180 children reportedly killed in a single day (March 18, 2025)



# WHAT IS TCL ?

- Its pronounced (Tickle)

TCL (Tool Command Language) is a scripting language known for its simplicity and flexibility. It is commonly used for rapid prototyping, scripting, and embedded applications. This guide will cover the basics of TCL, including variables, input/output, control structures, and loops.

# WHY DID IT BECAME INDUSTRY STANDARD ?

TCL has become the de facto standard embedded command language for Electronic Design Automation (EDA) applications. Whether you need to automate repetitive behavior, extend the functionality of an application, control multiple tools with a single script or create a custom GUI, TCL is your best choice.



# SWITCH CASE STATEMENT

- The switch case statement is a multibranching technique in TCL, but it only work with strings

```
switch $grade {  
    "A" {puts "Excellent"}  
    "B" {puts "very good"}  
    "C" {puts "good"}  
    "D" {puts "pass"}  
    default {puts "fail"}  
}
```

the output will look like this:

```
mohammad@DESKTOP-7CC1858:~/TCL$ tclsh conditionals.tcl  
please insert your grade in letters  
A  
your grade is :  
Excellent
```

# LOOPS

- We will talk about for, foreach and while loops in TCL

```
for {set i 0} {$i < 10} {incr i} {  
  puts "i value in the $i th iteration is $i"  
}
```

As we can see in **for loop** we have four curly braces and their roles are as follows:

{set loop variable value} {comparison or condition} {increment} { loop body}

```
mohammad@DESKTOP-7CC1858:~/TCL$ tclsh ExampleFour.tcl  
i value in the 0 th iteration is 0  
i value in the 1 th iteration is 1  
i value in the 2 th iteration is 2  
i value in the 3 th iteration is 3  
i value in the 4 th iteration is 4
```

# LOOPS

- Foreach loop is used on lists to iterate on all list elements and do a certain procedure on them

```
set weekdays {Sat Sun Mon Tue Wed Thu Fri}  
foreach day $weekdays {  
  puts "today is $day"  
}
```

In this example we should see the print statement output on all list elements

```
mohammad@DESKTOP-7CC1858:~/TCL$ tclsh ExampleFour.tcl  
today is Sat  
today is Sun  
today is Mon  
today is Tue  
today is Wed  
today is Thu  
today is Fri
```

# LOOPS

- A While loop executes as long as the condition is true

```
set m 0
while {$m < 10} {
  puts "m current value is $m"
  incr m
}
```

As we can see we must set the loop variable in the global scope, while {condition} {body} and inside the body we should add the increment statement to prevent infinite loop



# LOOPS

The iterations starts from zero so we will see the values from zero to nine

```
mohammad@DESKTOP-7CC1858:~/TCL$ tclsh ExampleFour.tcl
m current value is 0
m current value is 1
m current value is 2
m current value is 3
m current value is 4
m current value is 5
m current value is 6
m current value is 7
m current value is 8
m current value is 9
```

# REFERENCES

- [Tutorial point](#)
- [One Compiler](#)
- [TCL Manual](#)

If you need help with more resources please feel free to contact me, or lets chat on Calendly :

[Lets Chat](#)