

# Testimi i Softuerit

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# Testimi i Softuerit

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- Cka kuptojme me testim?
- Kush eshte testuesi?
- Kur duhet te filloj testimi?
- Kur duhet te perfundoj testimi?
- Si duhet testuar?

# Cka kuptojme me testim

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**Testimi** eshte nje process me ane te te cilit analizohet nje softuer me qellim qe te detektohen (lokalizohen) dallimet ne mes te kushteve (kerkesave) ekzistuese dhe kerkesave reale per ate softuer.



# Kush eshte testuesi

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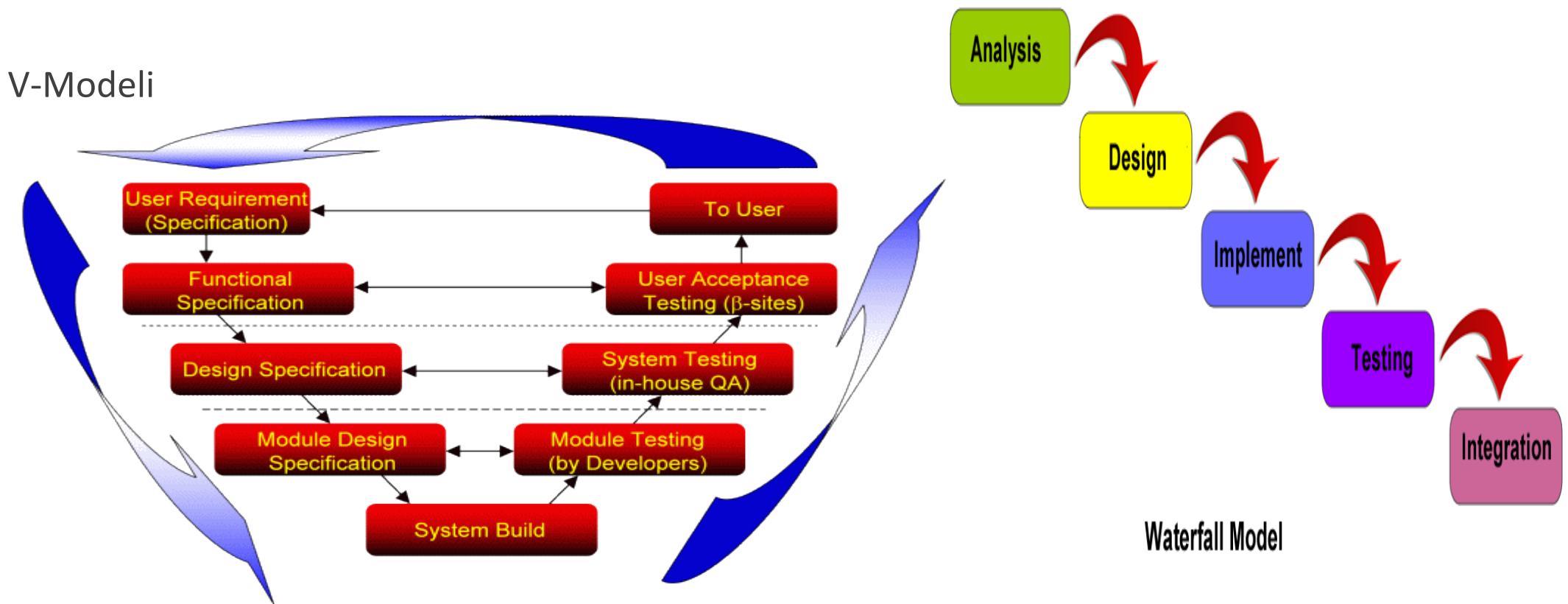
Kjo varet nga projekti dhe perjegjesit e projektit.

Ne te shumten e rasteve profesionet qe jane te perfshire ne testim jane:

- Software Tester
- Software Developer
- Project Lead/Manager
- End User etj.

# Kur duhet te filloj testimi

Kjo varet nga modeli qe perdoret per zhvillimin e softuerit.





# Kur duhet te perfundoj testimi

Eshte shume e veshtire per te qene te sigurt se softueri eshte 100% i testuar.

Marrim parasysh keto aspekte:

- Dedline-i i testimit
- Ekzekutimi i te gjithe test case-eve
- Mbulimi i kodit, funksionalitetit ose kerkesave e arrin nje pike te caktuar
- Shkalla e bug-s bie ne nje nivel te caktuar
- Buxheti

# Si duhet testuar



- Kuptojme se cka duhet te beje softueri – FUNKSIONALITETI
  - Percaktohet menyra si do te verifikojme funksionimin e sakte
  - Percaktojme strategjine qe do te erdoret
  - Caktohen personat per gjegjes per testim
  - Kryhet verifikimi
  - Krijhen test Case-at etj etj...

# Test Case Template





# Error! Fault! dhe Failure!

# *Bug, Fault & Failure*

A person makes an **Error**  
That creates a **fault** in software  
That can cause a **failure** in operation

**Error** : An error is a human action that produces the incorrect result that results in a fault.

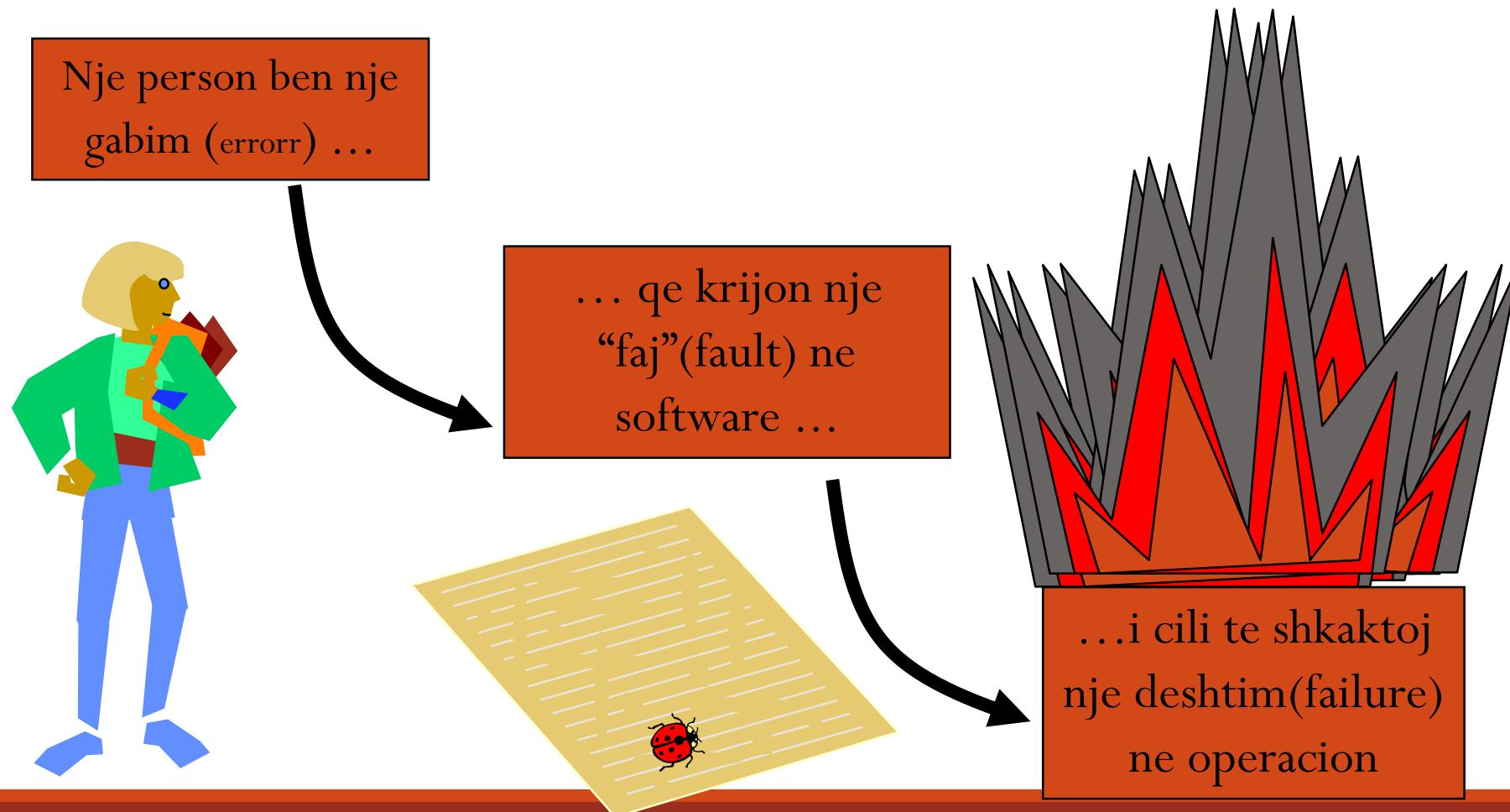
**Bug** : The presence of error at the time of execution of the software.

**Fault** : State of software caused by an error.

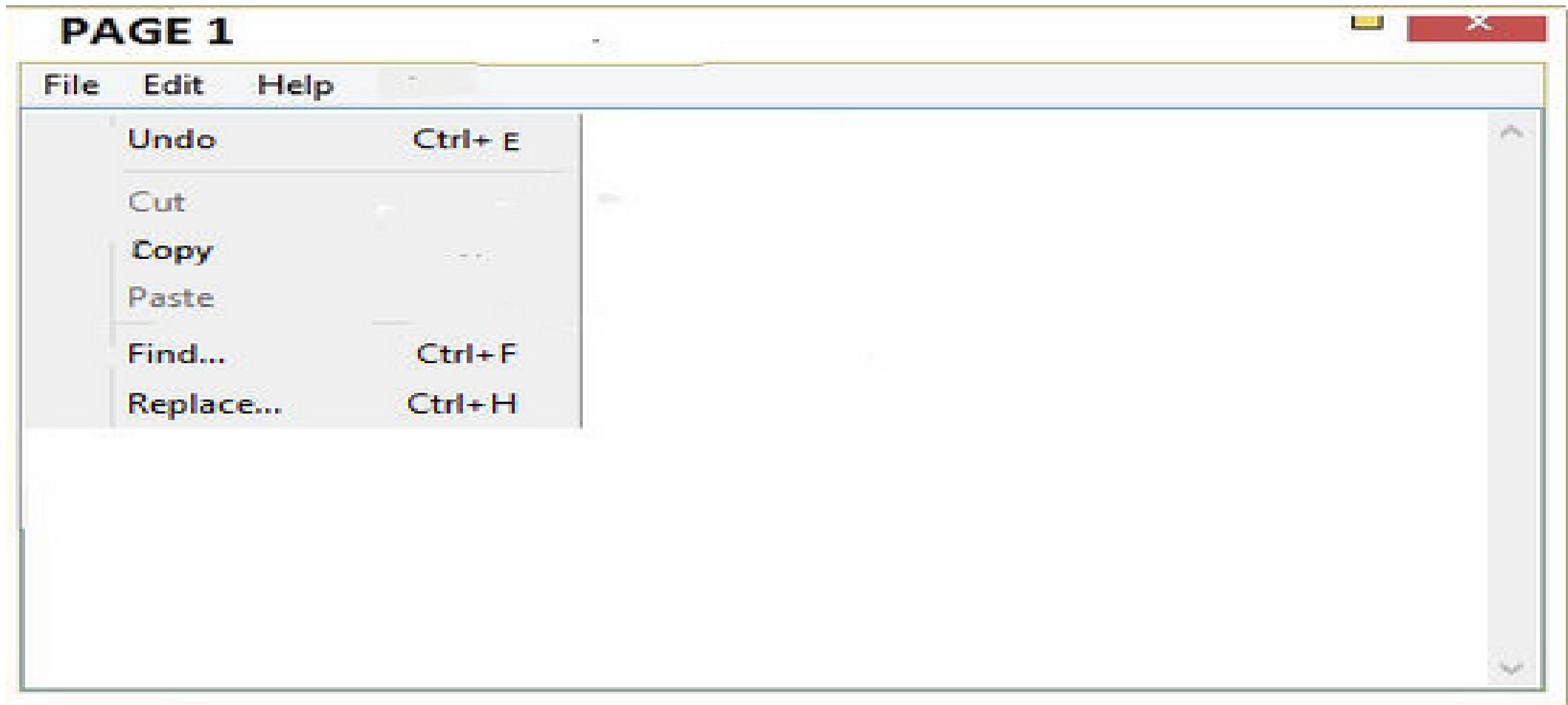
**Failure** : Deviation of the software from its expected result. It is an event.

# Error - Fault – Failure

Gabim – Faji - Deshtimi

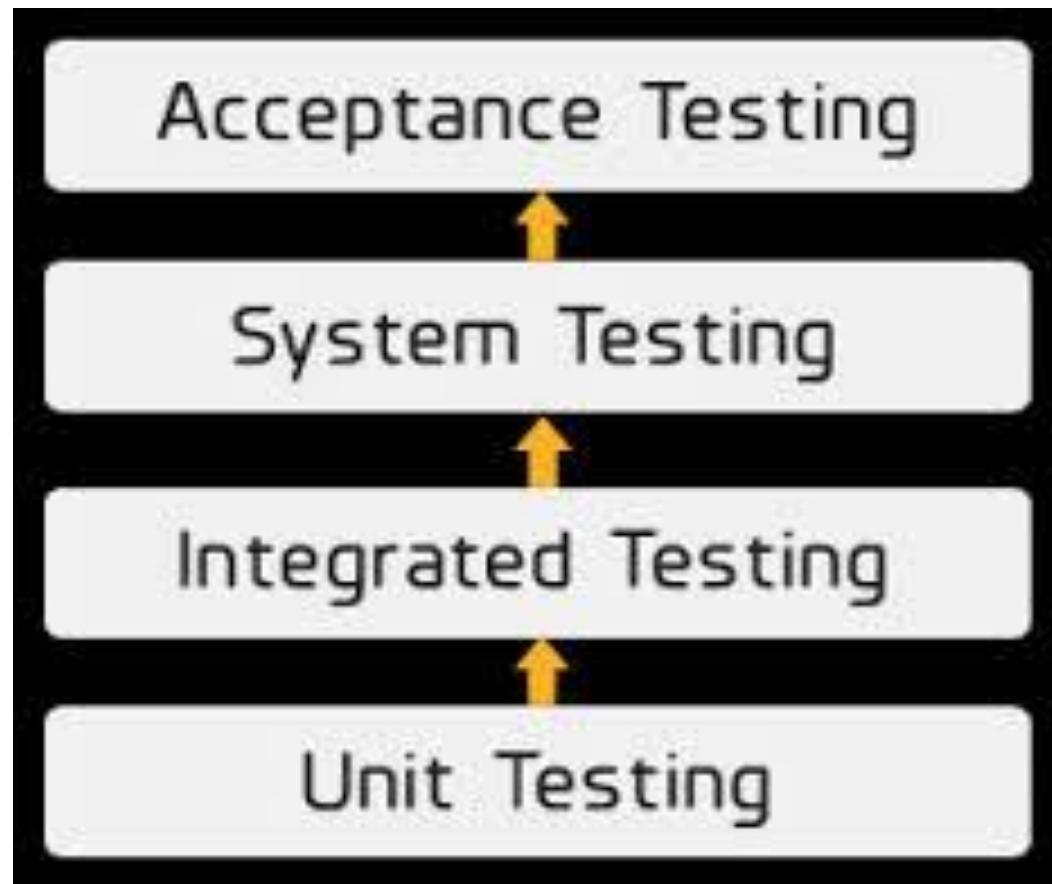


# Shemull-1: Gjej gabimin...



# Software Testing - Levels

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# Software Testing - Metodat

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White Box Testing  
Black Box Testing  
Grey Box Testing

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# Unit Testing

## Shembull - 2

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```
If(x - 100 <= 0)
    if( y - 100 <= 0)
        if(x=y - 200 = 0)
            crash ()
```

Per cfar vlera te X dhe Y kemi nje Crash?

# Detyre - 1: Eshte dhene kodi



```
Public int findLast (int[] x int y)
{
    For(int i == x.length-1; i>0, i--)
    {
        if (x[i] = y)
        {
            return i
        }
    }
    Return -1
}
//Testo; x=[2,3,5]; y=2. (Expected 0)
```

# Detyre - 2: Eshte dhene kodi



Public static LastZero(int[] x)

```
{  
    For(int i=0, i<x.length+1, i++)  
    {  
        if (x[i]==0);  
        {  
            return i  
        }  
    }  
    return -1  
}  
//Testo x=[0, 1, 0] (expected 2)
```



# Detyre - 3: Eshte dhene kodi

## Public int countPositive(int[x])

```
{  
    Int count ==0;  
    For(int i= 0; i<x.length; i--)  
    {  
        if (x[i]>=0)  
        {  
            count++;  
        }  
    }  
    Return count;  
}  
//test: X=[-4,2,0,2] (expected=2)
```

# Detyre - 4: Eshte dhene kodi



Public static int OddOrPos(int[] x)

```
{  
    int count = 0;  
    for(int i=1; i<x.length; i++)  
    {  
        if(x[i]%2 == 0 || x[i]>0)  
        {  
            count++;  
        }  
    }  
    Return count  
}  
//test: x=[-3, -2, 0, 1, 4] (expected =3)
```

# Kerkesat per detyrat 1-4

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- Kupto problemin permes kodit
- Identifiko gabimet (faults)
- Identifiko nje rast qe nuk shkakton gabim
- Korigjo gabimin dhe ri-testo
- Zhvillo psudo-kodet ne cosole ose w. form

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# PYETJE?

