



AA 2014-2015

## 7b. Eccezioni in Java: una visione operativa

1



```
class C {  
    public void via() {  
        primo();  
        System.out.println("siamo al via");  
    }  
  
    public void primo() {  
        secondo();  
        System.out.println("siamo nel primo");  
    }  
  
    public void secondo() {  
        throw new Exception();  
        System.out.println("siamo nel secondo");  
    }  
}
```

Cosa succede con (new C()).via();?

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# Abstract Stack Machine



Workspace

Stack

Heap

```
(new C()).via();
```

# Abstract Stack Machine



Workspace

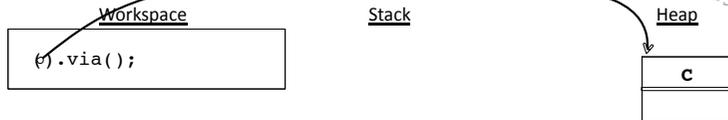
Stack

Heap

```
(new C()).via();
```



### Abstract Stack Machine



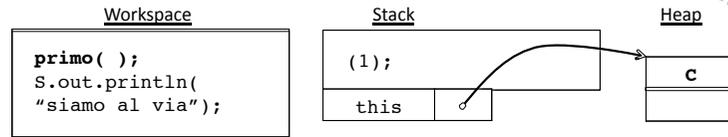
**Allocata una istanza della classe C sullo heap**



### Abstract Stack Machine

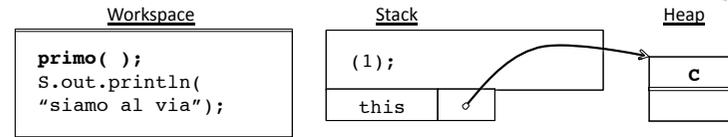


## Abstract Stack Machine

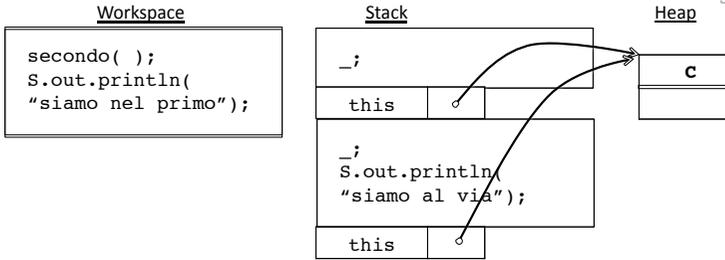


Viene salvato sullo stack la **continuazione** (cosa eseguire) dopo aver invocato "via"  
Viene salvato sullo stack anche il valore corrente di this

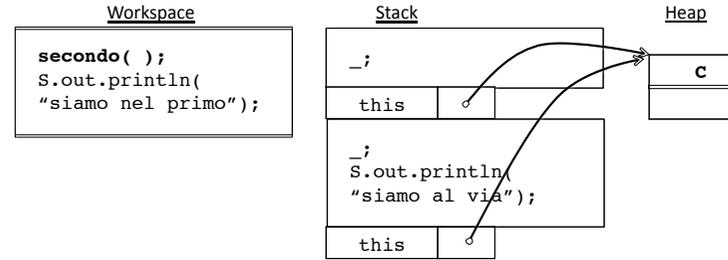
## Abstract Stack Machine



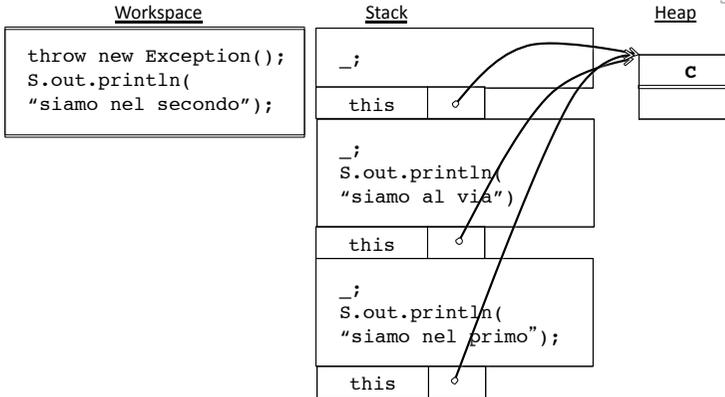
# Abstract Stack Machine



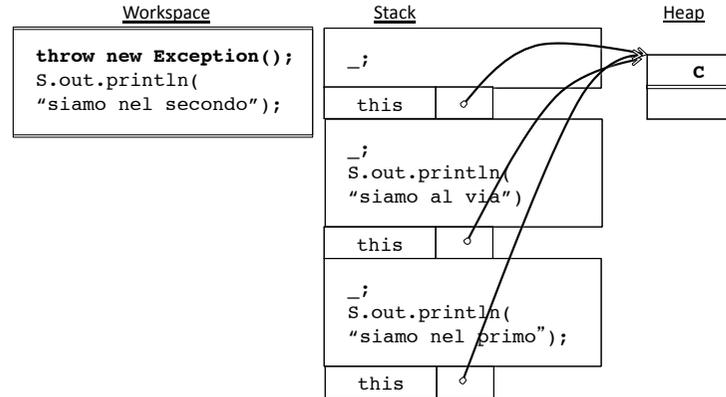
# Abstract Stack Machine



# Abstract Stack Machine

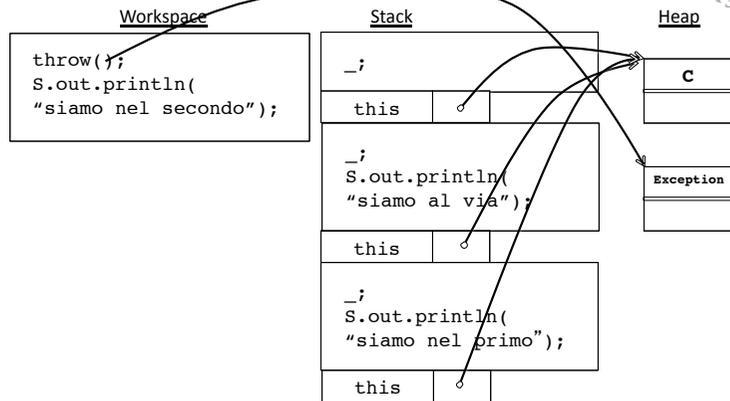


# Abstract Stack Machine





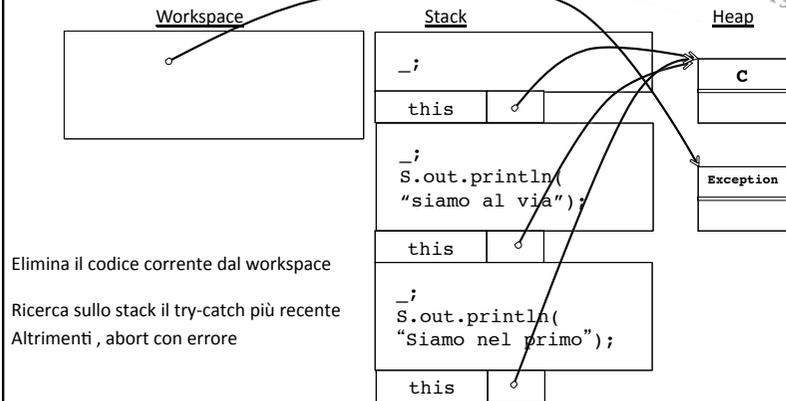
## Abstract Stack Machine



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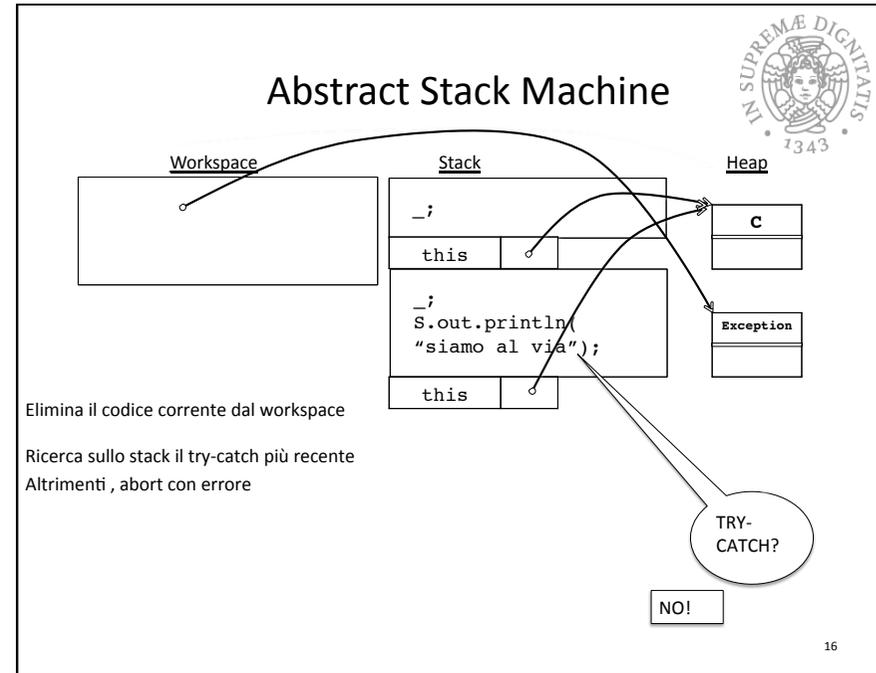
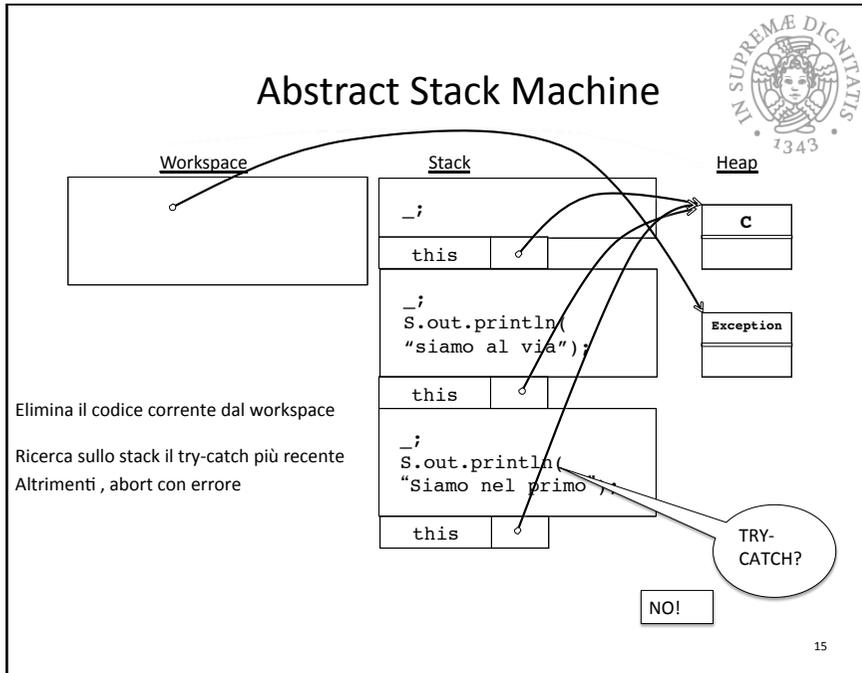


## Abstract Stack Machine



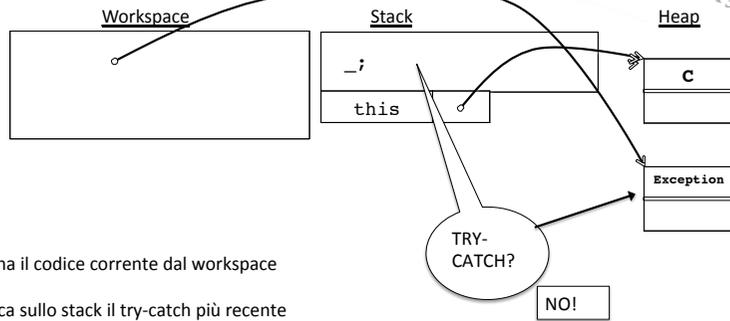
Elimina il codice corrente dal workspace  
 Ricerca sullo stack il try-catch più recente  
 Altrimenti , abort con errore

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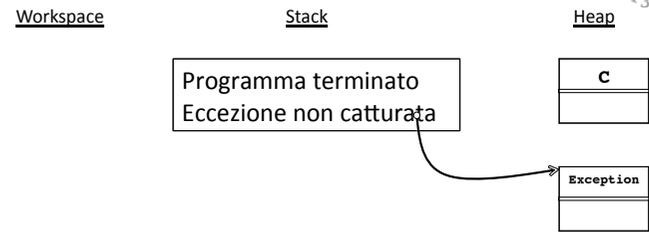
# Abstract Stack Machine



Elimina il codice corrente dal workspace  
Ricerca sullo stack il try-catch più recente  
Altrimenti , abort con errore



# Abstract Stack Machine





```

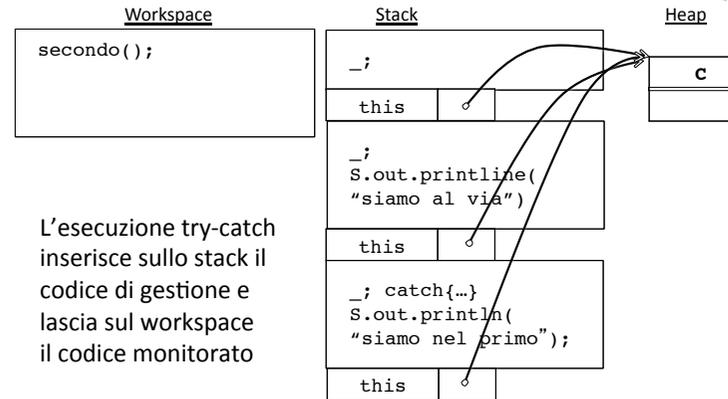
class C {
    public void via( ) {
        primo( );
        System.out.println(" siamo al via");
    }

    public void primo( ) {
        try { secondo( ); }
        catch (Exception e) { System.out.println("catturata"); }
        System.out.println("siamo nel primo");
    }

    public void secondo( ) {
        throw new Exception( );
        System.out.println("siamo nel secondo");
    }
}
    
```

Cosa succede con (new C( )).via( );?

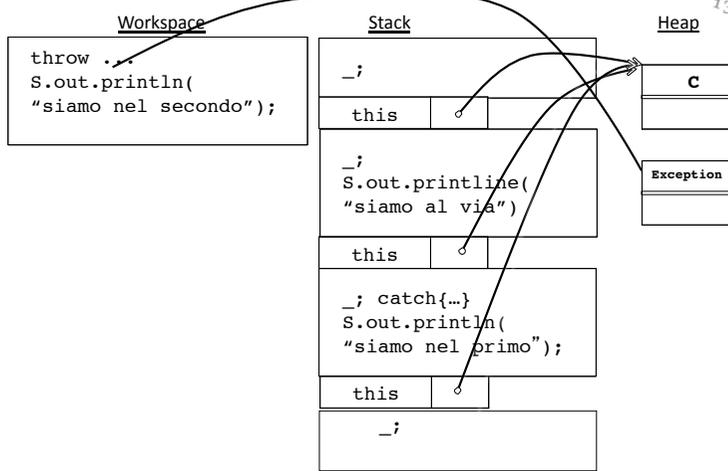
## Abstract Stack Machine



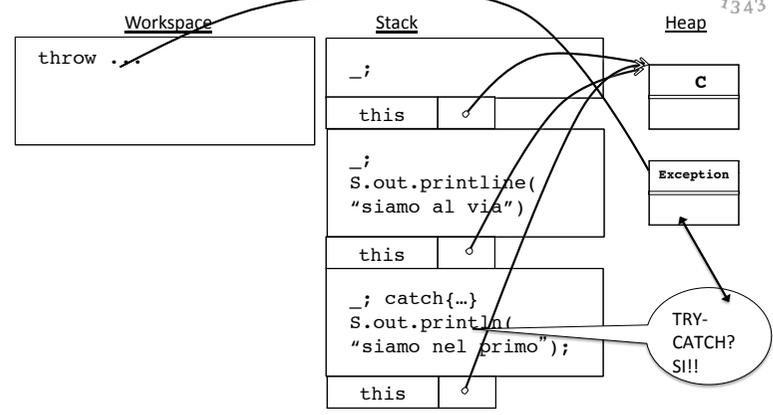
L'esecuzione try-catch inserisce sullo stack il codice di gestione e lascia sul workspace il codice monitorato



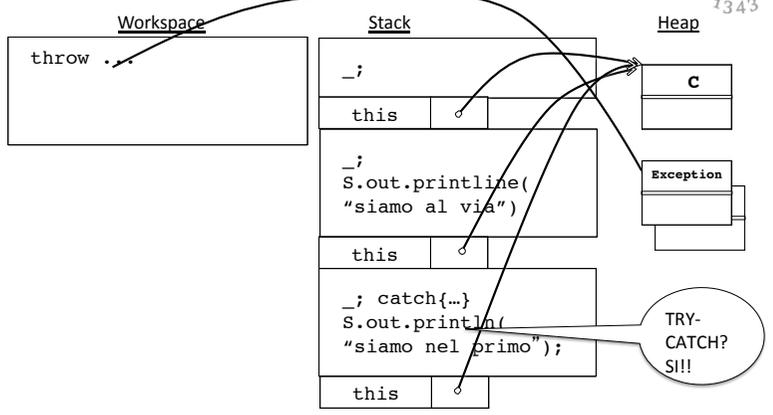
### Abstract Stack Machine



### Abstract Stack Machine



# Abstract Stack Machine



# Abstract Stack Machine

