



JAVA EXCEPTION: UNA VISIONE OPERAZIONALE

1



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

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

2

Abstract Stack Machine



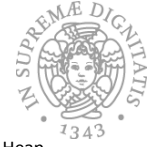
Workspace

Stack

Heap

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

Abstract Stack Machine

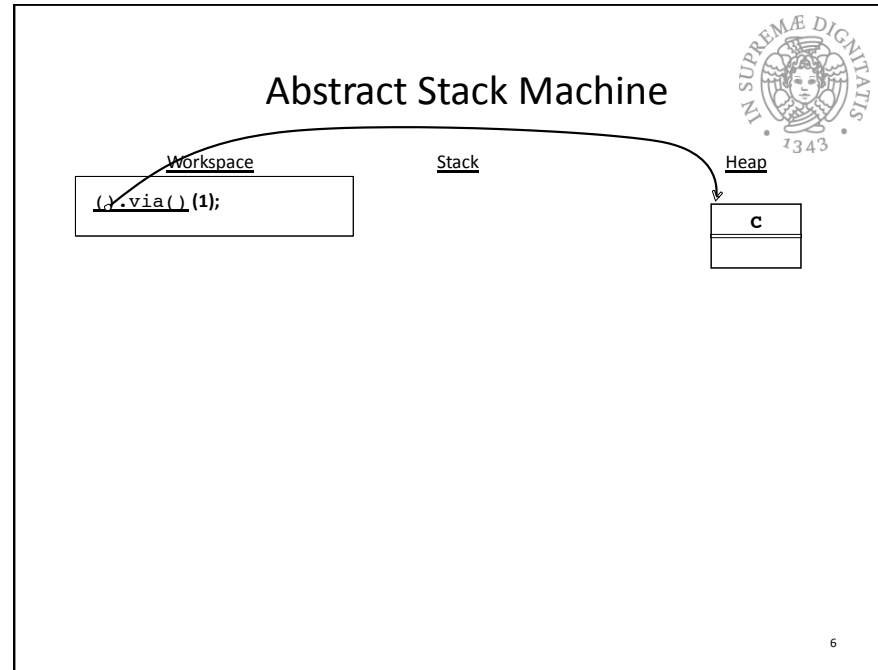
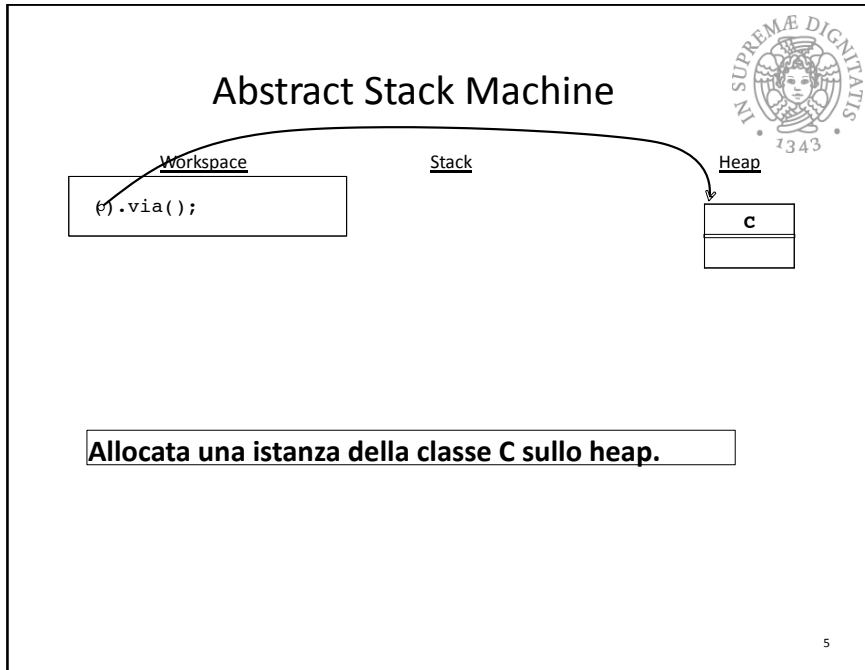


Workspace

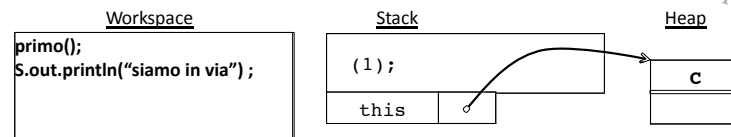
Stack

Heap

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(new C()).via();
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Abstract Stack Machine

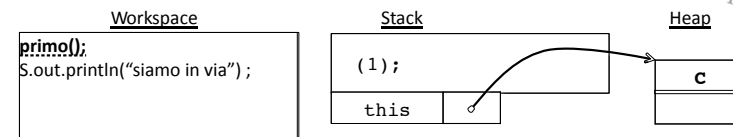


Viene salvato sullo stack la **continuazione** (cosa eseguire) dopo aver invocato "via".
Viene salvato sullo stack anche il valore corrente di this.

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Abstract Stack Machine

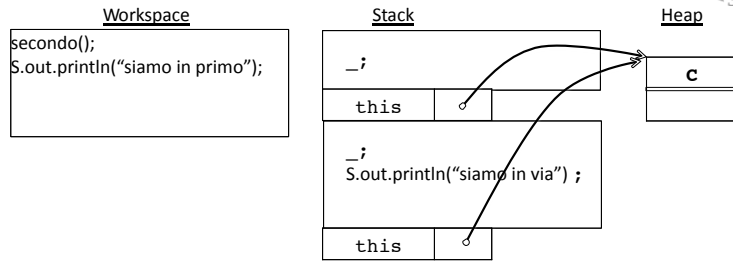


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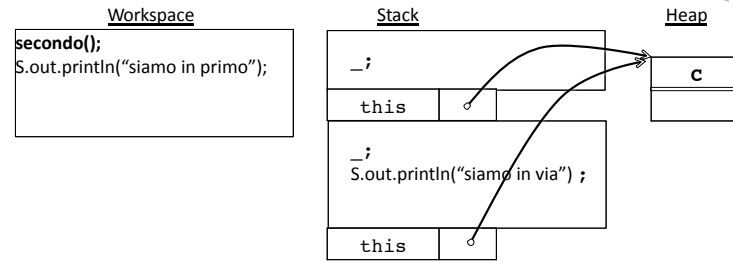
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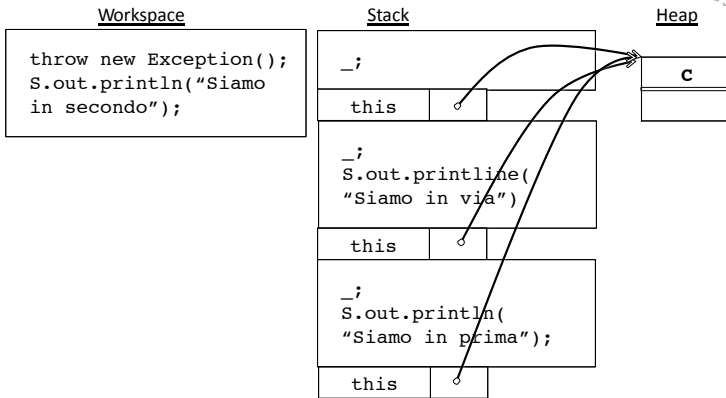
Abstract Stack Machine



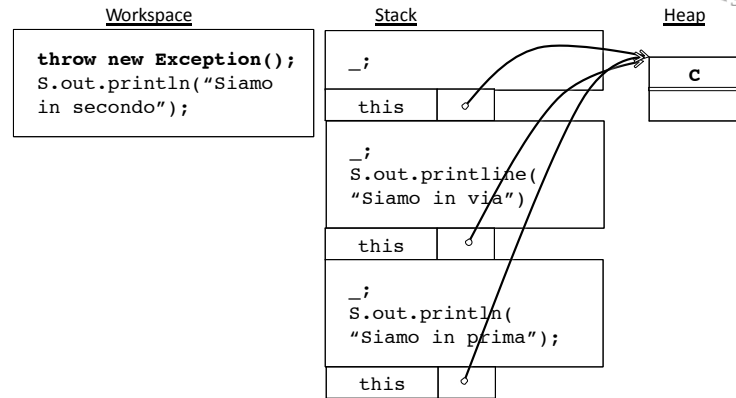
Abstract Stack Machine



Abstract Stack Machine

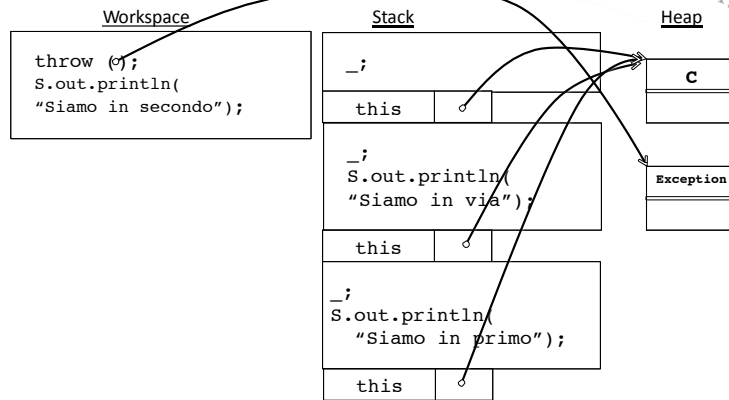


Abstract Stack Machine





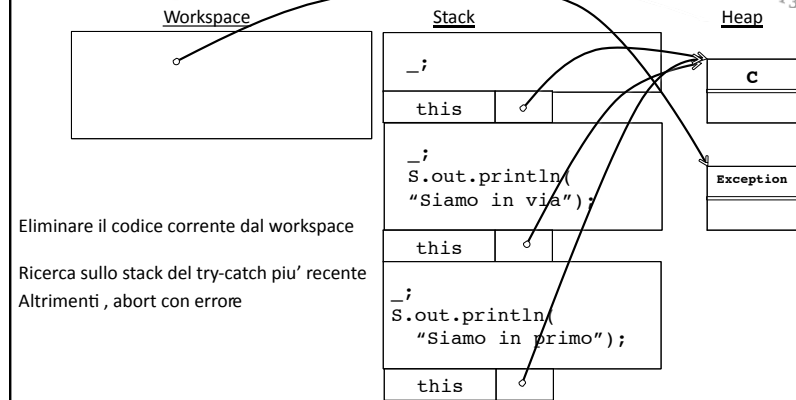
Abstract Stack Machine



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Abstract Stack Machine

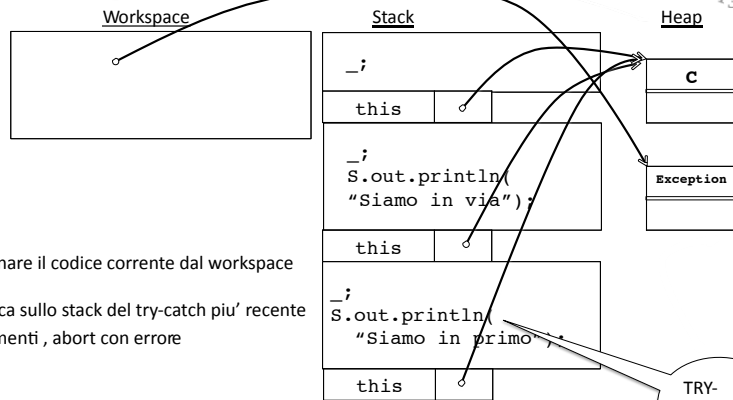


Eliminare il codice corrente dal workspace
 Ricerca sullo stack del try-catch piu' recente
 Altrimenti , abort con errore

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Abstract Stack Machine

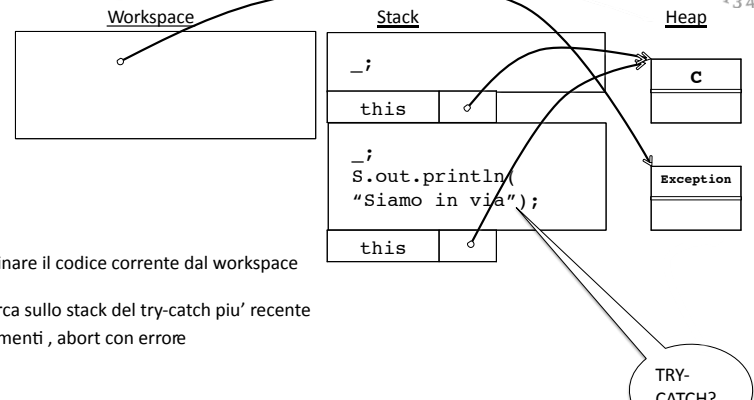


Eliminare il codice corrente dal workspace
 Ricerca sullo stack del try-catch piu' recente
 Altrimenti , abort con errore

NO!



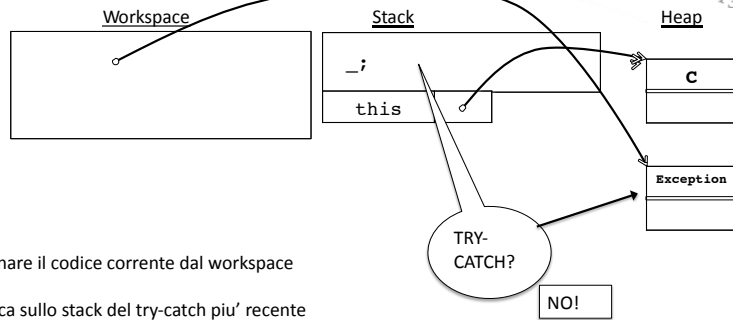
Abstract Stack Machine



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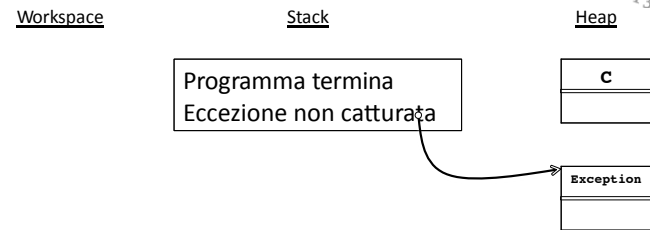
NO!

Abstract Stack Machine



Eliminare il codice corrente dal workspace
 Ricerca sullo stack del try-catch piu' recente
 Altrimenti , abort con errore

Abstract Stack Machine





```

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

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

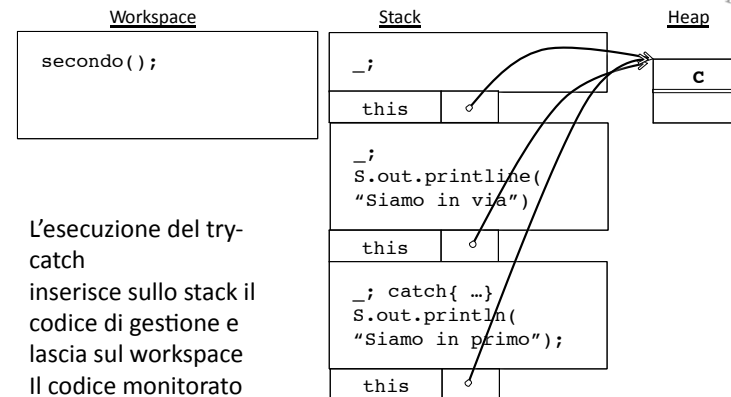
    public void secondo () {
        throw new Exception();
        System.out.println("siamo in secondo");
    }
}

```

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

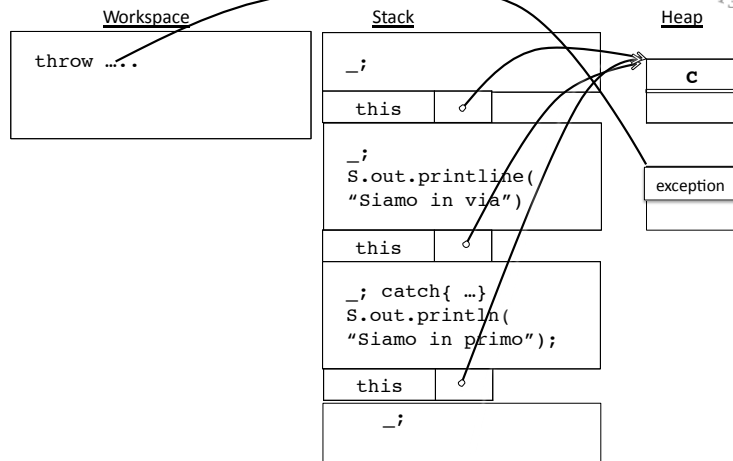
19

Abstract Stack Machine

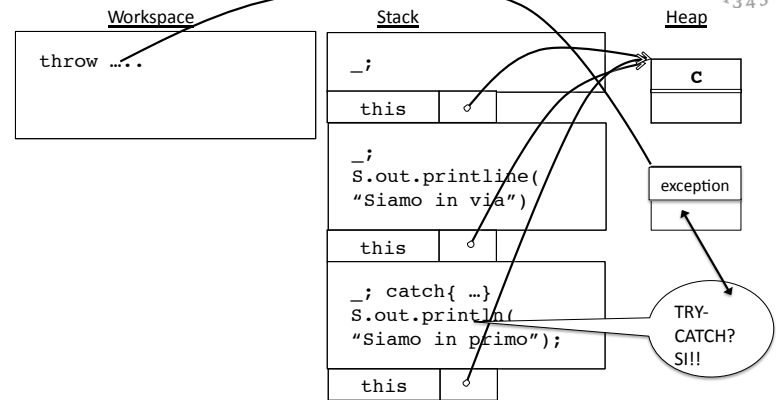


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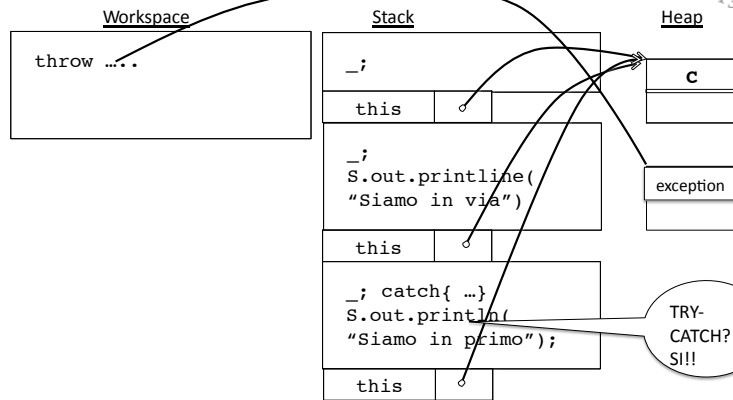
Abstract Stack Machine



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