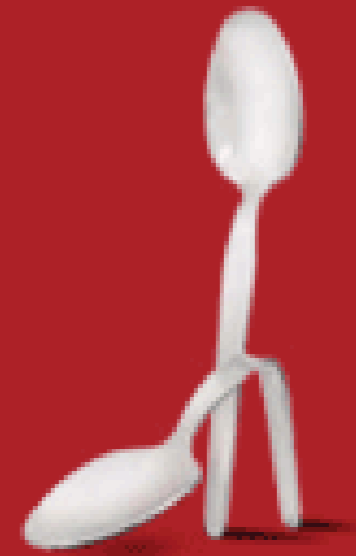




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RIFE

Modern web application development in
Java with Web Continuations

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What is RIFE?

- full stack end-to-end framework
- rapid web application development
- implicit standardized application structure
- maintainable and inspectable code-base
- respects HTTP limitations
- cutting edge development features



What does RIFE provide?

- componentized **web application engine**,
- integrated **web continuations**,
- multi-format **template engine** (xhtml, xml, sql, java, text, ...),
- template **content transforming** (xslt, filtering, ...),
- automated **form building**,
- **validation** framework,
- **authentication** framework,
- database **query builders**,
- fault-tolerant **JDBC wrappers**,
- integrated **connection pooling**,
- web-oriented **database utilities**,
- service-oriented **life-cycle management**,
- cron-like **scheduler**,
- **configuration** framework.



Today's focus

Web continuations



What are web continuations? (1/4)

```
public class NumberGuess extends Element
{
    private static Random sRandomNumbers = new Random();

    public void processElement()
    {
        Template template = getHtmlTemplate("guess");

        int answer = 0;
        int guesses = 0;
        int guess = -1;

        synchronized (this) { answer = sRandomNumbers.nextInt(101); }

        while (guess != answer)
        {
            print(template);

            pause();

            guess = getParameterInt("guess", -1);
            if (guess < 0 || guess > 100)
            {
                template.setBlock("warning", "invalid");
                continue;
            }

            guesses++;

            if (answer < guess) template.setBlock("indication", "lower");
            else if (answer > guess) template.setBlock("indication", "higher");
        }

        template = getHtmlTemplate("success");
        template.setValue("answer", answer);
        template.setValue("guesses", guesses);
        print(template);
    }
}
```

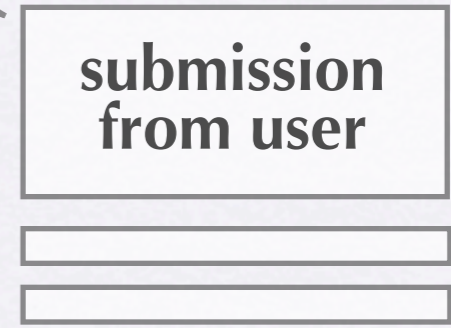
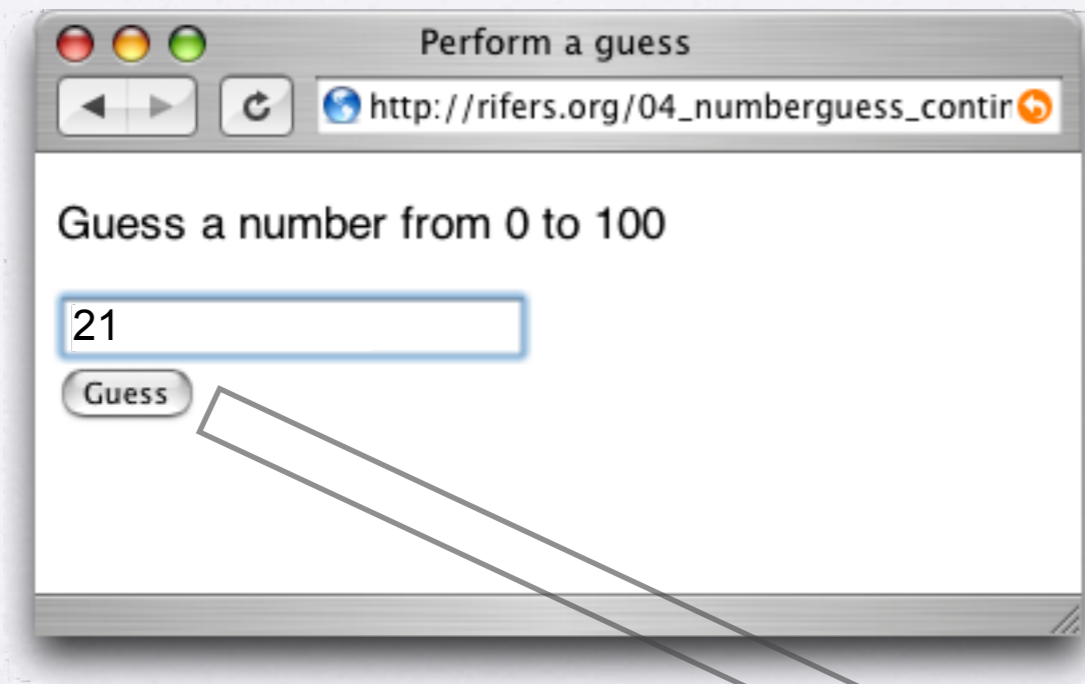
local variable context

program location





What are web continuations? (2/4)





What are web continuations? (3/4)

```
public class NumberGuess extends Element
{
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    {
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        while (guess != answer)
        {
            print(template);

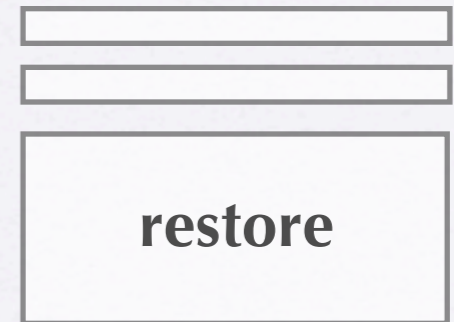
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            guess = getParameterInt("guess", -1);
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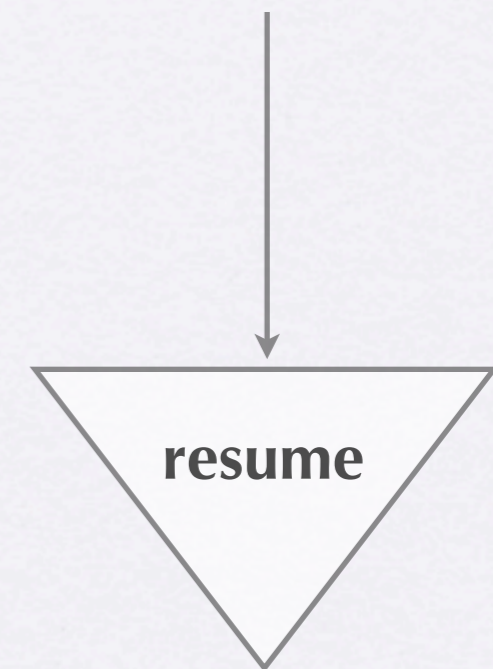
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        template.setValue("answer", answer);
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        print(template);
    }
}
```



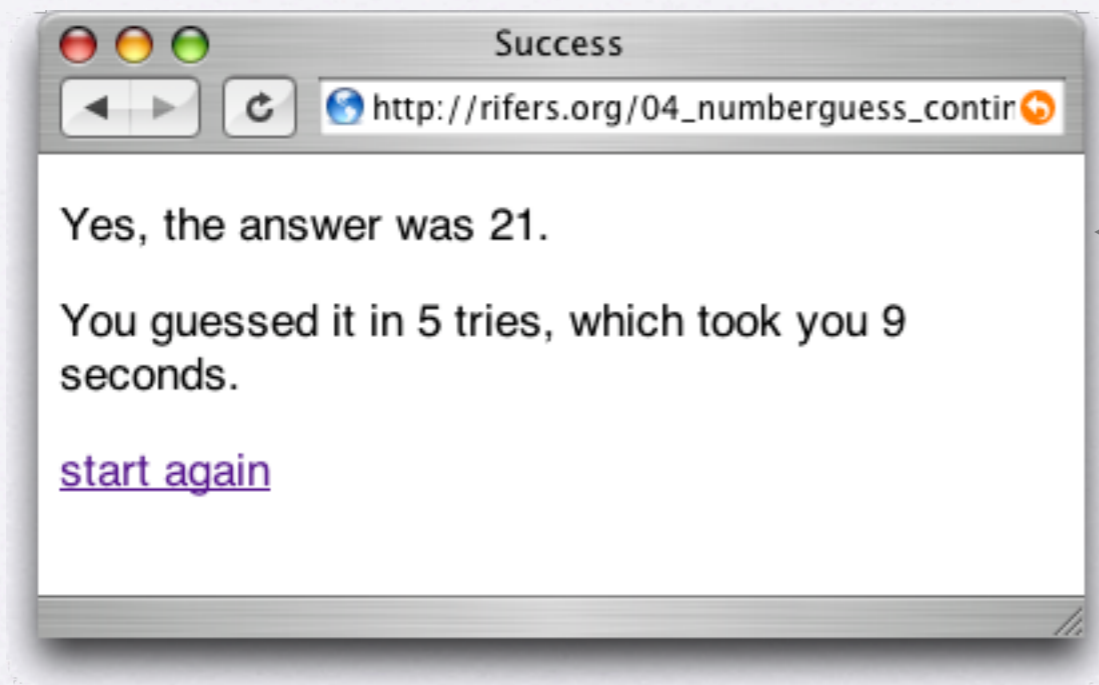
local variable context

program location





What are web continuations? (4/4)



result goes
to user

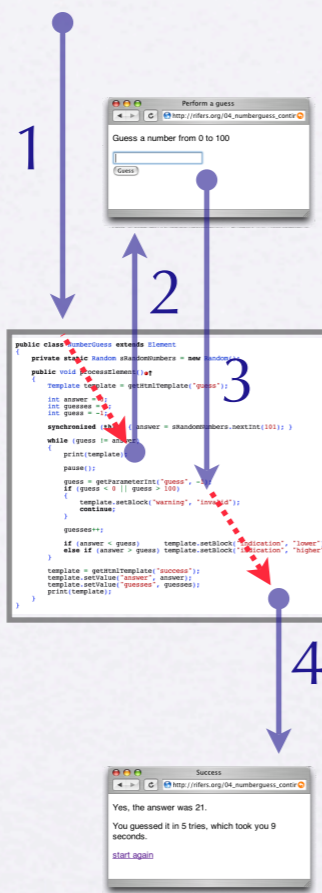




How does it compare?

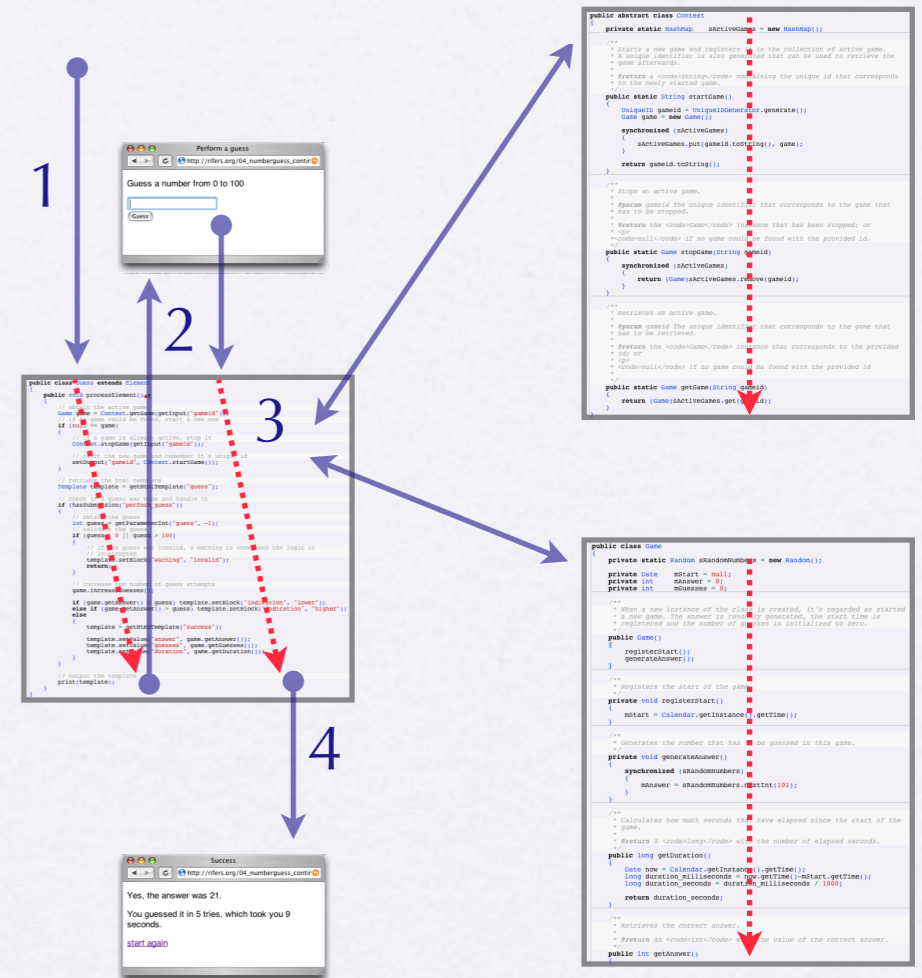
Continuations

Traditionally



1. process request
2. display form
3. process reply
4. display result

executed 1x
internal state



executed 2x

external state



Benefits of web continuations

- natural control flow
- centralized and automatic state handling
- facilitates creation of complex web application flows



Downsides to web continuations

- cloning of variable context can be expensive
- state is handled by the server-side
- tiny restrictions for the developer



More information



<http://rifers.org>



<http://www.uwyn.com>





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