Google[™] 09

Advanced Custom Search Configuration

Nicholas Weininger May 27, 2009



Custom Search Engine in brief

A contextual search experience that's right for your audience:

- Pick the "slice of the web" your users care about
 - one site, 1000 sites, subparts of sites...
- Customize ranking and search navigation
- Present results with the look and feel you choose
- Make money by displaying relevant ads



The New Hork Times

Search

Today | Past 7 Days | Past 30 Days | Past 12 Months Your Search obama Search

All Results | Articles | Multimedia

1-10 of 10.000+ Results



Times Topics: Barack Obama

News about President Barack Obama, including commentary and archival articles published in The New York Times.

Obama Won't Bar Inquiry, or Penalty, on Interrogations

President Obama left open the door to creating a commission to investigate the Bush administration's use of harsh interrogation techniques.

April 22, 2009 - By SHERYL GAY STOLBERG - U.S. / Politics

Justice Department Memos

Obama-Inspired Campaign Falls Short in South Africa - The Lede ...

Last November, just after Mr. Obama won the election, the Democratic Alliance revealed "a new logo, a different look," based closely on the Obama campaign ...

April 23, 2009 - The Lede



Obama Urges Passage of Energy Legislation

The president, visiting a wind energy plant in lowa on Earth Day, called on Congress to pass comprehensive energy legislation, ...

April 23, 2009 - By SHERYL GAY STOLBERG - U.S. / Politics

With New Law, **Obama** Calls for More National Service - The Caucus ...

Former President Clinton and Senator Ted Kennedy joined President Obama and Vice President Biden for a Doug Mills/The New York Times Former President ...

April 21, 2009 - The Caucus

Example: NY Times Site Search

What we'll cover in this session

- XML format for defining custom search engines
- Options for programmatically creating CSEs
 - Upload/download via RESTful API
 - Linked CSEs for "on the fly" definitions
 - Provisioning CSEs with Google Services for Websites
- Advanced presentation options
 - Pagemaps and Microformats
 - Custom Search Element AJAX
 - Site Search Server side XML



Defining a CSE in XML



Components of a CSE definition in XML

- Context defines the "frame" of the search engine
 - Basic settings, look and feel
 - Refinements for faceted search
 - Synonyms
- Annotations define the contents of the search engine
 - Include/exclude sites or parts of sites
 - Boost or demote for custom ranking
- New! Promotions define completely custom results



Context in an example CSE

```
<CustomSearchEngine>
<Title>Universities</Title>
<Context>
<Facet>
<FacetItem title="I ectures">
<Label name="lectures" mode="BOOST" weight="0.8">
<Rewrite>lecture OR lectures
</Label>
</FacetItem>
</Facet>
<BackgroundLabels>
<Label name="_cse_omuauf_lfve" mode="FILTER"/>
<Label name="_cse_exclude_omuauf_lfve" mode="ELIMINATE"/>
</BackgroundLabels>
</Context></CustomSearchEngine>
```



Annotations in an example CSE

```
<Annotations>
<Annotation about="webcast.berkeley.edu/*" score="1">
<Label name="university_boost_highest"/>
<Label name="lectures"/>
</Annotation>
<Annotation about="www.youtube.com/ucberkeley/*" score="1">
<Label name="university_boost_highest"/>
<Label name="videos_boost_mid"/>
<Label name="lectures"/>
</Annotation>
</Annotations>
```



Promotions in an example CSE



RESTful URLs for creating CSEs

- Creating a new CSE context
 - http://www.google.com/coop/api/default/cse/<CSE_ID>
- Uploading annotations to your account
 - http://www.google.com/coop/api/default/annotations/
 - Note annotations are common across different CSEs
- Uploading Promotions
 - http://www.google. com/coop/api/default/promotions/<CSE_ID>



Advanced features available in XML

- User-defined synonyms
- Configurable boost/demote weights
- Specify top N results
- Bias results by date
- Get all the details from the Custom Search Developer Guide http://code.google.com/apis/customsearch/docs/dev_guide.
 httml



Creating a Linked CSE



Linked CSE features

- Not tied to a Google account, defined by a URL
- Can be created on the fly from other data
 - Example: make Annotations from the links on a page
- Just like the upload/download XML format
- Context and Annotations can be combined or separated
 - Annotation files can be included from context files
- Definition cached by Google, refreshed on demand



Linked CSE example: About.com

- Thousands of different CSEs for different subsites
- Each one tailored to a particular section of website
- Results in XML



Save an average of \$220 when you create your own vacation package.

About : Student Travel

florida

Travel

Student Travel

Essentials

- Student Travel 101
- Student Airfare Finders
- · How to Rush a Passport
- Spring Break Without a Passport
- Top Spring Break Hot Spots 2007

Topics

- Student Travel Planning
- Student Travel
 Discounts
- Educational Student Travel
- Student Tour Groups
- Travel Safety and Health
- Hostels, Accommodations
- Spring Break
- Phones, Mail and
- Travel Money Matters
- Travel Gear, Packing
- Work Abroad Jobs Abroad
- Student Travel Agencies
- C Women Travelers Tips
- Travel Guides, Phrase Books
- Photos, Maps, Blogs

Buyer's Guide

- Eurail Passes
- Backpacker Gift Ideas

From About.com

Florida Day Trips

Many popular destinations are a short distance and make perfect day trips. qoflorida.about.com/od/attractions/ss/daytrips.htm

Charlie - Florida White French Lop Rabbit Picture

Charlie - Florida White French Lop Rabbit Picture.

exoticpets.about.com/od/rabbits/ig/Pet-----Pictures/Charlie---Florida-Whi

Florida Vacation Guide - Florida for Visitors Travel Planner ...

Florida for Visitors is your travel planning guide to Florida vacations attractions, beaches and DISNEY WORLD, including information on Disney World ...

goflorida.about.com/

Florida Printables - Florida Vocabulary

Florida Printables - Florida Vocabulary. Print the Florida Vocabulary Sheet and fill in the Florida related words.

homeschooling.about.com/od/unitssubjgeog/ss/floridaprint_2.htm

More results »

Custom Web Results

Things to Do in Florida - Florida Attractions - TripAdvisor

Florida attractions: Visit TripAdvisor, your source for the web's best unbiased reviews, travel articles and guidebook listings about things to do in ...

www.tripadvisor.com/Attractions-g28930-Activities-Florida.html

Florida Tourist Attractions

State offbeat attractions, roadtrip sights and virtual vacation highlights. Part of travel book Roadside America's mega-website -- museums, monuments. ...

www.roadsideamerica.com/map/fl.html

Everglades National Park - Everglades National Park (U.S. National ...

Sunset over Snake Bight in Florida Bay. Exploring Park Waters. The open waters

of Florida Bay and the Ten Thousand Islands represent roughly one-third of ... www.nps.gov/ever/

The Official Tourism Council Web Site for the Florida Keys! Key ...

The Official Florida Keys and Key West Web Site is your Premier Travel Guide to

the Florida Keys: Key Largo, Islamorada, Marathon, Lower Keys, Key West. www.fla-keys.com/







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About.com search example

Linked CSE example: Blogger Gadget

- A dynamic CSE for searching your blog (and more) (XML)
- Results are inline to the blog and inherit blog look and feel
- Results using AJAX API



Blogger gadget example: XML source

```
<GoogleCustomizations>
<Include href="http://www.google.com/cse/tools/makeannotations?url=http%3A%2F%2Fwww.skrishnasbooks.com%2Ffeeds%
2Fposts%2Fdefault%3Fstart-index%3D1%26max-results%3D500&amp;label=blog_world&amp;pattern=exact&amp;
type=Annotations" type="Annotations"/>
<Include href="http://www.google.com/cse/tools/makeannotations?url=http%3A%2F%2Fwww.skrishnasbooks.com%2Ffeeds%
2Fposts%2Fdefault%3Fstart-index%3D501%26max-results%3D500&amp;label=blog_world&amp;pattern=exact&amp;
type=Annotations" type="Annotations"/>
<Annotations>
<Annotation about="burtonreview.blogspot.com/*">
<Iabel name="bloglist1"/><Label name="blog_world"/></Annotation>...</Annotations><CustomSearchEngine version="1.0"
language="en"><Title>S. Krishna's Books</Title>Context><Facet><FacetItem title="My Blog List"><Label name="bloglist1"
mode="FILTER"/></FacetItem></Facet><BackgroundLabels><Label name="blog_world" mode="FILTER"/><Label name="blog_homepage" mode="ELIMINATE"/></BackgroundLabels></Context></CustomSearchEngine>
</GoogleCustomizations>
```

S. Krishna's Books

Reviews, Giveaways, and Random Musings



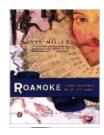
WELCOME!

Welcome to my blog, where I will discuss books that I am reading/have read or am interested in! Please feel free to participate in the discussion or send me your thoughts by leaving a comment!

If you are interested in having me review a book or using one of my reviews, please look at my review policy and feel free to e-mail me!

Follow me on Twitter

CURRENTLY READING



This Blog Linked From Here My Blog List

S. Krishna's Books: Laura Rider's Masterpiece – Jane Hamilton 7 hours ago

Laura Rider's Masterpiece is a very well-written novel. It seems to be an exploration of how authors write and how they create characters. I liked pondering the writing process as well as thinking about how writers got their ideas and ...

http://www.skrishnasbooks.com/

S. Krishna's Books: New Author Challenge 2009 Mar 31, 2009

Laura Rider's Masterpiece – Jane Hamilton 74. The Empty Mirror – J. Sydney Jones 75. Caravaggio's Angel – Ruth Brandon 76. The Beach Street Knitting Society and Yarn Club – Gil Mcneil. So, since I've already read 76 books by new authors ...

http://www.skrishnasbooks.com/

S. Krishna's Books: Sunday Salon Mar 29, 2009

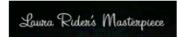
Laura Rider's Masterpiece – Jane Hamilton. The Geometry of Sisters – Luanne Rice. The Empty Mirror – J. Sydney Jones. When You are Engulfed in Flames – David Sedaris. Caravaggio's Angel – Ruth Brandon. Girls in Pants: The Third Summer ...

http://www.skrishnasbooks.com/

1 More results »

TUESDAY, APRIL 21, 2009

Laura Rider's Masterpiece – Jane Hamilton

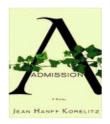


Title: Laura Rider's Masterpiece

Author: Jane Hamilton ISBN: 9780446538954

BOOK GIVEAWAYS

Current giveaway:



I'm giving away 3 copies of Admission by Jean Hanff Korelitz. Contest ends April 19. [review][entry page]

Previous giveaway:



Congratulations to the 5 winners of my Girls in Trucks

Blogger gadget example: search in context



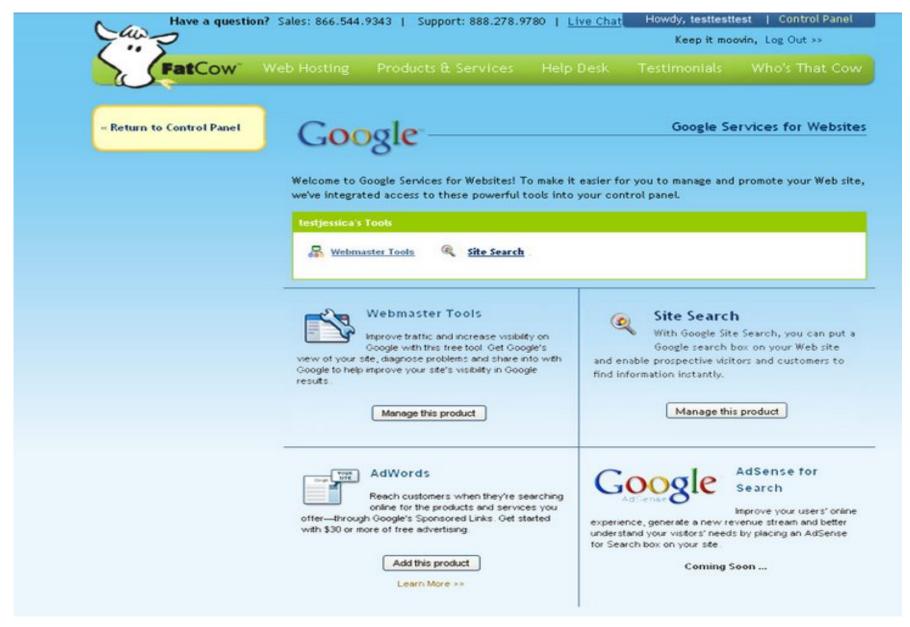
CSE Provisioning API



Google Services for Websites

- Google Apps accounts automatically created
- Provision CSE via API on behalf of your customers
- Sitemaps submitted to Webmaster Tools used by CSE





Services for Websites example: FatCow

Advanced presentation options



Metadata - Pagemaps and Microformats

- Allows further customization and rich snippets
- Several formats recognized:
 - Pagemaps
 - Microformats
 - RDFa (coming soon)
- Google indexes structured metadata in these formats; you can retrieve it in XML or, soon, AJAX results for your CSE



Metadata: how it looks in XML results

```
-<PageMap>
  -<DataObject type="">
       <a href="https://www.edu.com/attribute">Attribute name="publish status">published</a>/Attribute>
       <a href="">Attribute name="item source">none</attribute></a>
       <a href="item destination">restricted</attribute></a>
       <a href="customer.id">1553907</a>Attribute>
       <a href="Attribute name="encoded tag facet">Author</attribute></a>
       <a href="encoded tag facet">interview</attribute></a
       <a href="tag facet">Sean Hannity</attribute></a>
       <a href="id">Video:81003</attribute></a>
       <a href="tag facet">Bill O'Reilly</attribute></a>
       <a href="encoded tag facet">On+Notice%2FDead+to+Me</attribute></a
     -<Attribute name="keywords t">
         Stephen Colbert, papa bear, Bill O'Reilly, On Notice/Dead to Me, immigration, jon stewart, interview,
         shut up, English, ID, identification, reasonable suspicion, inspector clouseau, rumble, peers, respect, ag
         gun, head, New York Times, culture warrior, barnes and noble, sticker, moon, slicker, Grand Canyon,
         evil, facts, opinion, activist judges, illegal immigrants, gay marriage, NBC news, potato, passport, Hugo
         Francisco, job, mayor, Pelosi, sign, autograph, parking space, fight, Irish, cliche, butt, effete, act
       </Attribute>
       <a href="season s">season 3</a>Attribute>
       <a href="contact name">Guillaume Lehoux</a>/Attribute>
     -<Attribute name="image src">
         http://www.comedycentral.com/sitewide/droplets/img_rez.jhtml?image=/images/shows/colbert_report/v
       </Attribute>
       <a href="episode cmsid s">180685</a>/Attribute>
       <a href="encoded tag facet">Immigration</a></attribute>
       <a href="content type s">Video</a></attribute>
       <a href="pk i">81003</a>Attribute>
       <a href="episode guestname t">Bill O'Reilly</attribute></a>
       <a href="customer cbg status">empty</attribute></a
       <a href="encoded tag facet">Papa+Bear</attribute></a>
       <a href="expiration date">2038-01-19T03:14:07Z</a></attribute>
```

Google 09

Custom Search Element - AJAX

- Allows full UI styling with CSS on the client side
- Custom Search element tailored to special CSE features
 - Refinements
 - Promotions
- Now available with AdSense ads
- Configure a Custom Search element http://www.google.com/webelements/customsearch/



Macworld Search Forums Hints Blogs Opinion News iPod iPhone Features

Local Employment Hiring

jobs.CareerArrow.us/employment Positions open in your area. Hiring immediately. Apply here.

Bad Job? Go to School Now

TheEducationEdge.com Earn a Bachelors Degree online in your spare time. Financial Aid tool

Steve Jobs still involved in Apple's operations, as promised | Mac ...

Steve Jobs has been on a leave of absence since January, but reports say he remains involved in Apple's operation. www.macworld.com

Steve Jobs stays grounded during absence | Mac | MacUser | Macworld

While we don't know exactly what Apple CEO Steve Jobs has been up to during his leave of absence, we can tell you one thing he hasn't been doing: traveling.

www.macworld.com

Apple announces its last year at Macworld Expo, no Jobs keynote ...

Macworld Expo 2009 will be Apple's last, according to a statement released by the company on Tuesday. Apple also said that Steve Jobs would not deliver the ...

www.macworld.com

Book Review: Inside Steve's Brain | Mac | Macworld

Kahney's the right person for the job, too: He has an extensive history covering Apple and Steve Jobs since the early 1990's, has written two previous books ...

www.macworld.com

Steve Jobs holds court | iPhone | Mac Word | Macworld

Apple's CEO made a rare appearance on the company's quarterly conference call, fielding questions about the economy, the iPhone, and Apple's future.

www.macworld.com

Steve Jobs to keynote WWDC | Mac | Macworld

Steve Jobs will once again keynote Apple's Worldwide Developers Conference, giving developers a look into the future of application development.

www.macworld.com

Analysis: How Jobs' profile impacts Apple | Mac | Macworld

Lots of corporations make product announcements, for example, but few can count on the blanket coverage that a Steve Jobs' keynote will generate. ...

www.macworld.com

Apple, Steve Jobs face securities fraud lawsuit | Business Center ...

Apple, several board members and CEO Steve Jobs face a new class action lawsuit over the backdating of stock options in 2006.

www.macworld.com

1 2 3 4 5 6 7 8 More results >

Ads by Google

Phone Developers Wanted

Phone Developer **Jobs**. Set a Rate, Apply to **Jobs**. Guaranteed Payment.

www.oDesk.com

Careers

Ads by Google

Search 45,000 Jobs that Pay Over \$100,000. Start Searching Now. www.TheLadders.com/Careers

Apple Os X

Find Bargain Prices On Apple Os X. BizRate.com

Unemployment Grants Here

\$30,000 In Unemployment Grants. Billions Avaliable. Never Repay! UnEmployment-Grants.com

AJAX search element example: Mac search

Google I/O

Introducing The Most Awesomest Web Elements

Custom Search Results

ShopNBC - Official Site

Ads by Google

X

www.ShopNBC.com Great Prices on Quality Items. Purchase Now - ShopNBC.

Find Robot Competitions

www.RobotEvents.com Complete Robotics Event Listings and Registration Information

Android 1.5 Now Available



The latest version of the Android platform brings new features, improvements, and enhancements to Android-powered phones.

www.android.com

Official Google Blog: Where's my Gphone?

Nov 5, 2007 ... However, we think what we are announcing -- the Open Handset Alliance and Android -- is more significant and ambitious than a single phone. ... googleblog.blogspot.com/2007/11/wheres-my-gphone.html

Google I/O - Mastering the Android Media Framework

Some monks might take a vow of silence, but **Android** certainly hasn't. Attend this session, and help your app find its voice. **Android** engineer David Sparks ... code.google.com/events/io/sessions/MasteringAndroidMediaFramework.html

Official Google Blog: The first Android-powered phone

Sep 23, 2008 ... Today, T-Mobile announced the world's first **Android**-powered phone. This marks an important milestone in the young history of **Android**. ... googleblog.blogspot.com/2008/09/first-android-powered-phone.html

Google I/O - Sessions

Google I/O offers 80+ sessions that present highly technical content on **Android**, Chrome, App Engine, Google Web Toolkit, AJAX and many more. ... code.google.com/events/io/sessions.html

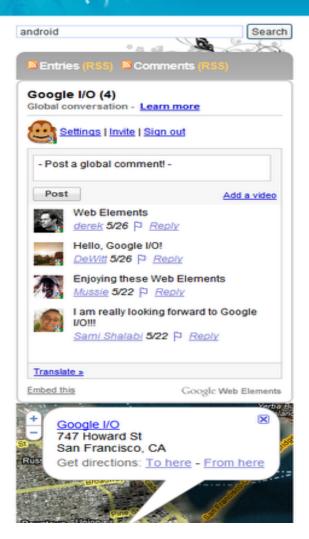
Official Google Blog: Calling all developers: \$10M Android challenge

Nov 12, 2007 ... Today, the team is releasing an early look at the Android SDK for developers interested in building applications for Android. ...

googleblog.blogspot.com/2007/11/calling-all-developers-10m-android.html

Google I/O - Android Lightning Talks

If you've done a cool hack involving Android, if you've devised a clever technique for a common



AJAX search element example: I/O search



Google Site Search - XML results

- Configure custom rendering on the server side
- Mashup XML results with other search results/content
- Ads are optional
- Prices start at \$100/year





Search Results

diabetes coverage

SEARCH

To find the best health insurance plan for you, start by getting a free quote.



eHealthInsurance works with a variety of health insurance companies to provide you with affordable health insurance plans. Learn more about eHealthInsurance and our services here.

http://www.ehealthinsurance.com/ehi/health-insurance.ds

Narrow search results for 'diabetes coverage':

Help Center Health Insurance Companies Insurance by State Health Insurance Plans

KPS Health Plans Sound Harbor Elite Washington Health Insurance ...

Prescription Drug Coverage. Generic Prescription Drugs; \$10 copay, deductible waived. \$2000 maximum benefit per Enrollee per year, except for diabetes ... http://www.ehealthinsurance.com/ehi/PlanBenefitDetails.ds?cid=98103300&pid=93&eh .fromPage ...

Blue Cross and Blue Shield of Minnesota Health Insurance

Coverage Area: Minnesota -- with national coverage for members who travel or who ... in helping patients manage diabetes and helping smokers try to quit. ... https://www.ehealthinsurance.com/ehi/insurance-carrier/Blue-Cross-and-Blue-Shiel -of-Minne ...

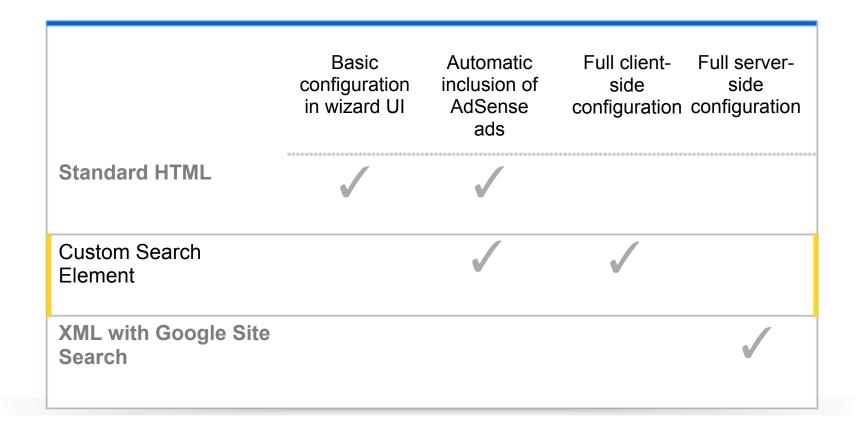
Kaiser Permanente CO Health Insurance

Kaiser Permanente offers individual and family coverage for individuals who from diabetes to the relationship of light alcohol use and heart disease, ... http://www.ehealthinsurance.com/ehi/insurance-carrier/Kaiser-Permanente.html?car

Google Site Search example: eHealthInsurance



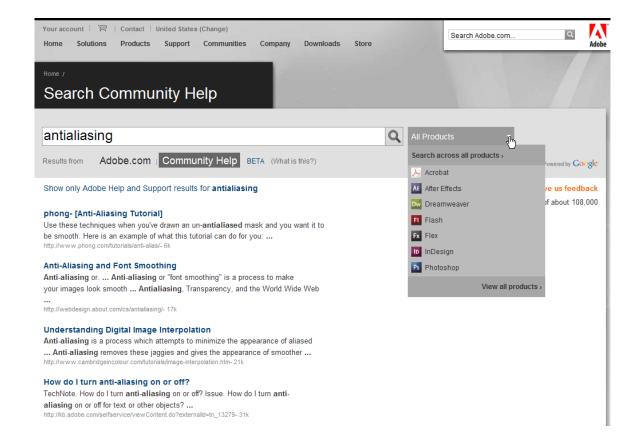
CSE presentation options: summary





Custom Search - Welcome Adobe!







Adobe Community Help Mark Nichoson



The goal: Integrating content & community silos



Adobe.com

- Help
- Search
- Knowledgebase
- Forums
- Dev Center
- Design Center
- Exchange

External web

- Blogs
- Articles
- Tutorials
- Podcasts
- Forums
- Plug-ins



Google Site Search

Hosted Solution

- Software-as-aservice
- No hardware or software locally
- Setup in minutes



Customizable look and feel

- Upload company logo and specify colors during setup
- XML API for further customization

Ad-Optional

- All ads are turned off
- Fully integrated into customer's website

Powered by Google.com

- Google.com relevancy
- Sub-second response time
- Scale to any number of web pages or queries
- Continuous improvements by Google engineers

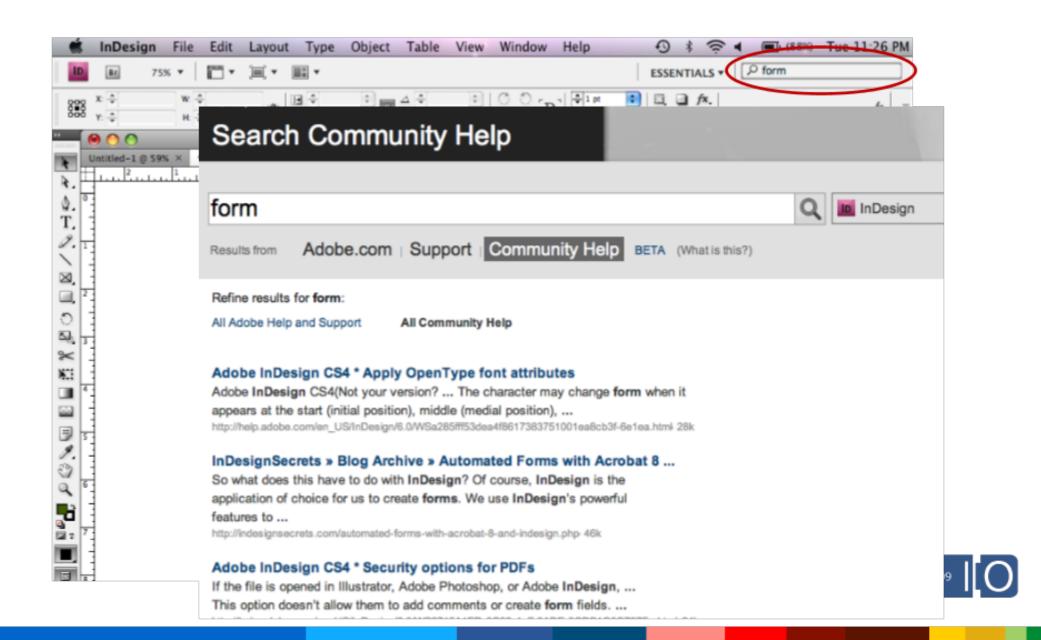
Enhanced Index Coverage

- Site owners can submit sitemap
- Google will create special index for customer
- Will provide end users with more search results



Adobe Community Help

Includes content from entire Adobe community



Adobe Community Help

- Adobe Community Help
 - Community search
 - Community contributions and expert moderation
- Unified search
 - Over 2,400 community URLs indexed shoulder-to-shoulder with Adobe content
 - Allows Adobe to be part of the community itself
 - XML integration allows for consistent user experience
- Currently enabled for:
 - All Creative Suite 4 Products, and Lightroom
 - Flex, AIR, and ColdFusion
 - Framemaker, Robohelp, Captivate



Adobe Blueprint Joel Brandt



Programmers use the Web.



Programmers use the Web. A lot.



Programmers use the Web. A lot.

In a recent study, over 33% of code was taken from the Web.



Programmers use the Web. A lot.

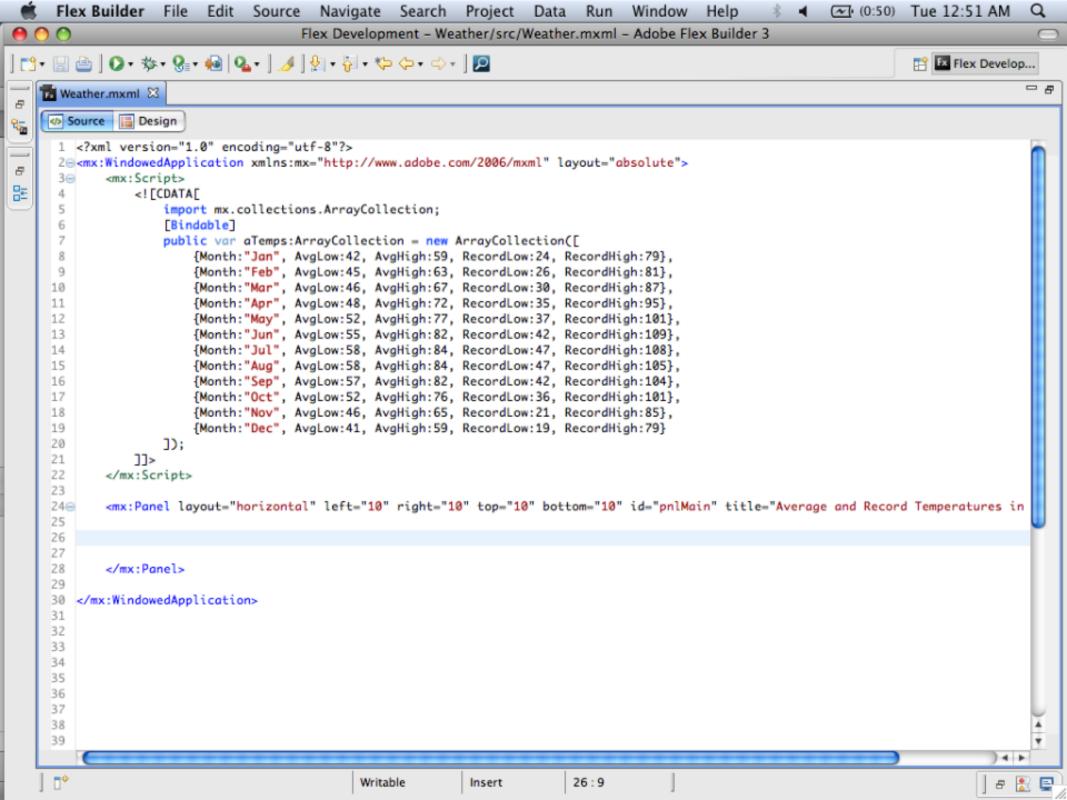
In a recent study, over 33% of code was taken from the Web.

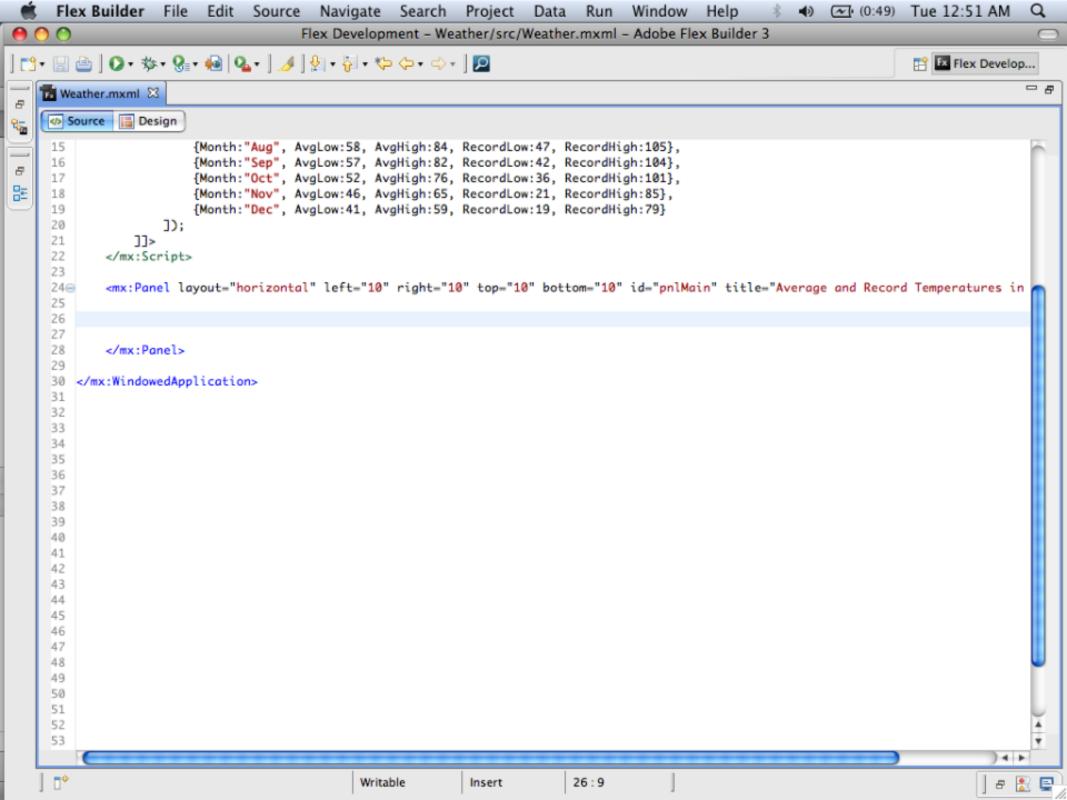
But today's programming tools don't know anything about this!

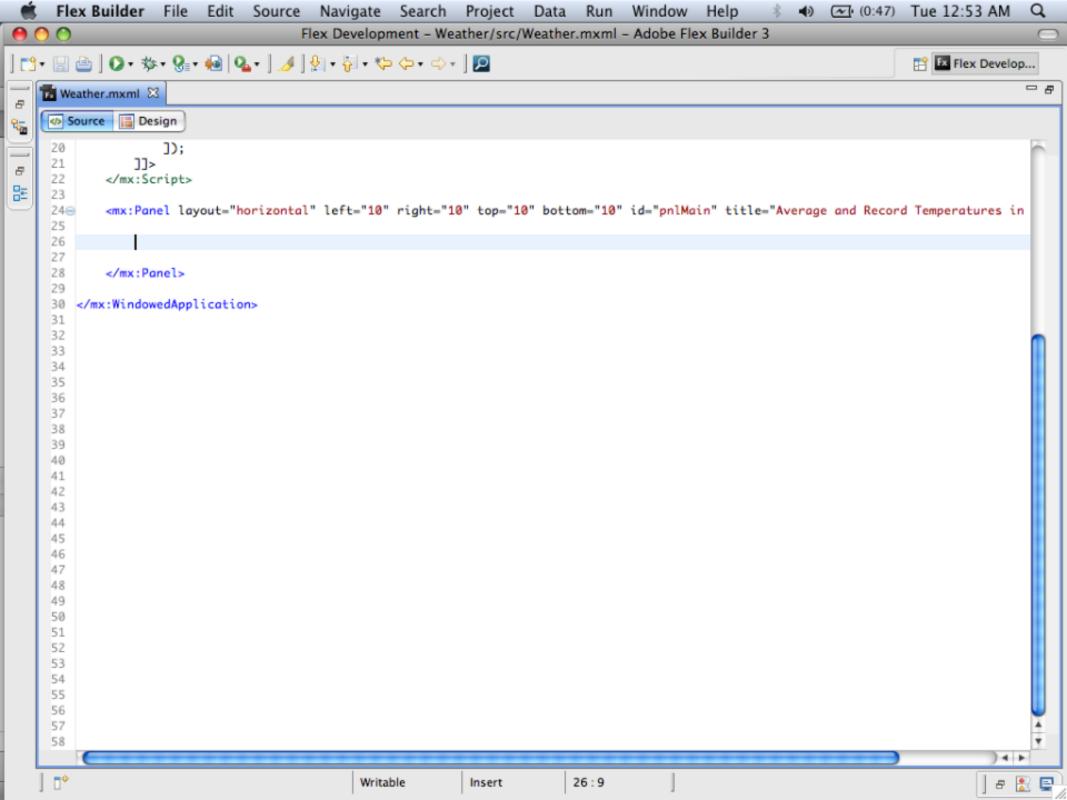


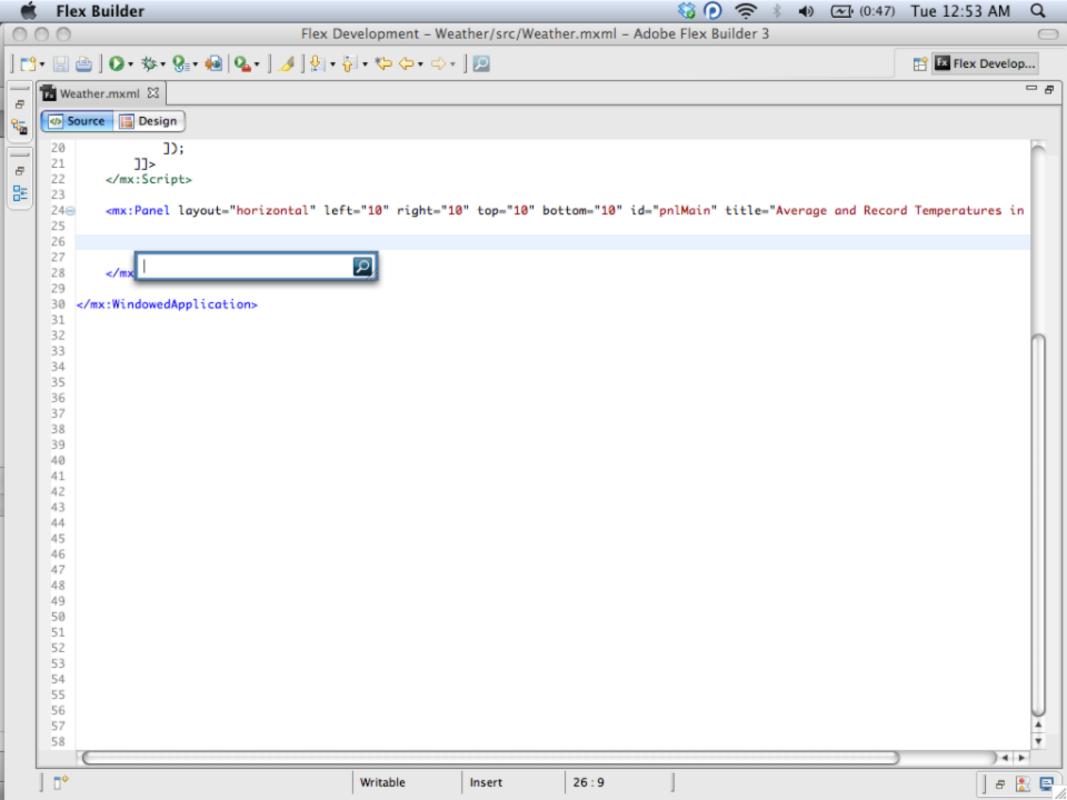
Idea: Leverage Google Custom Search to Bring Search Inside the Development Environment

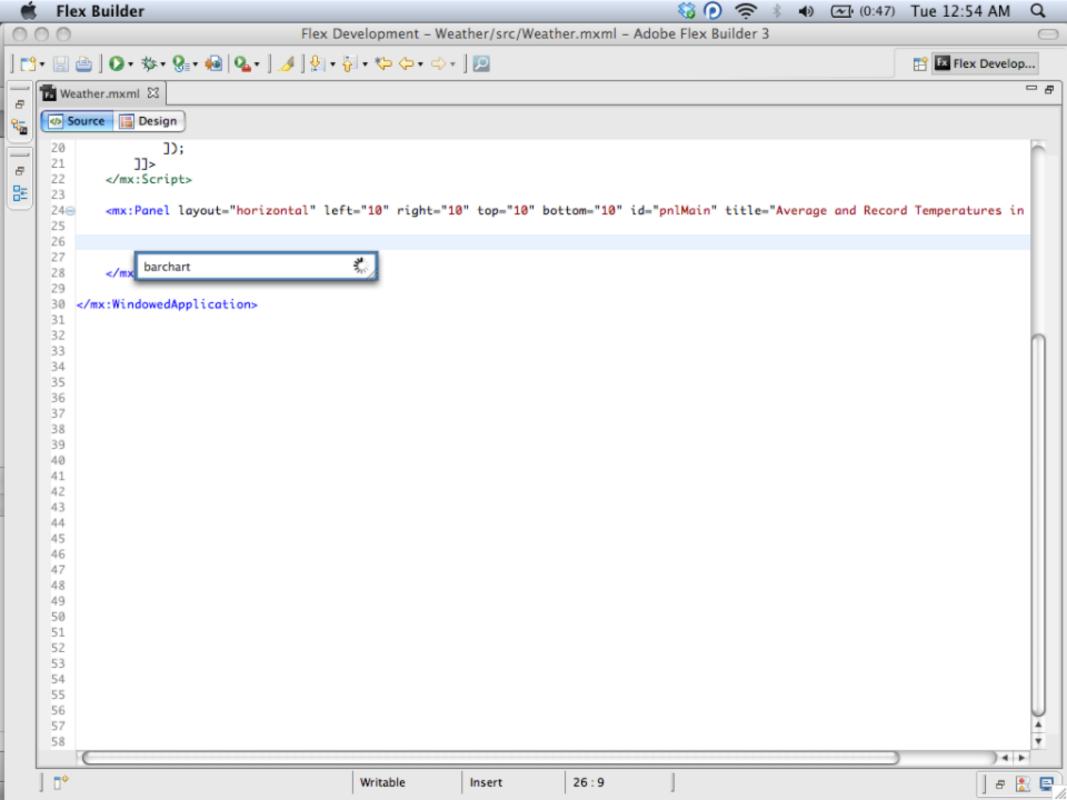


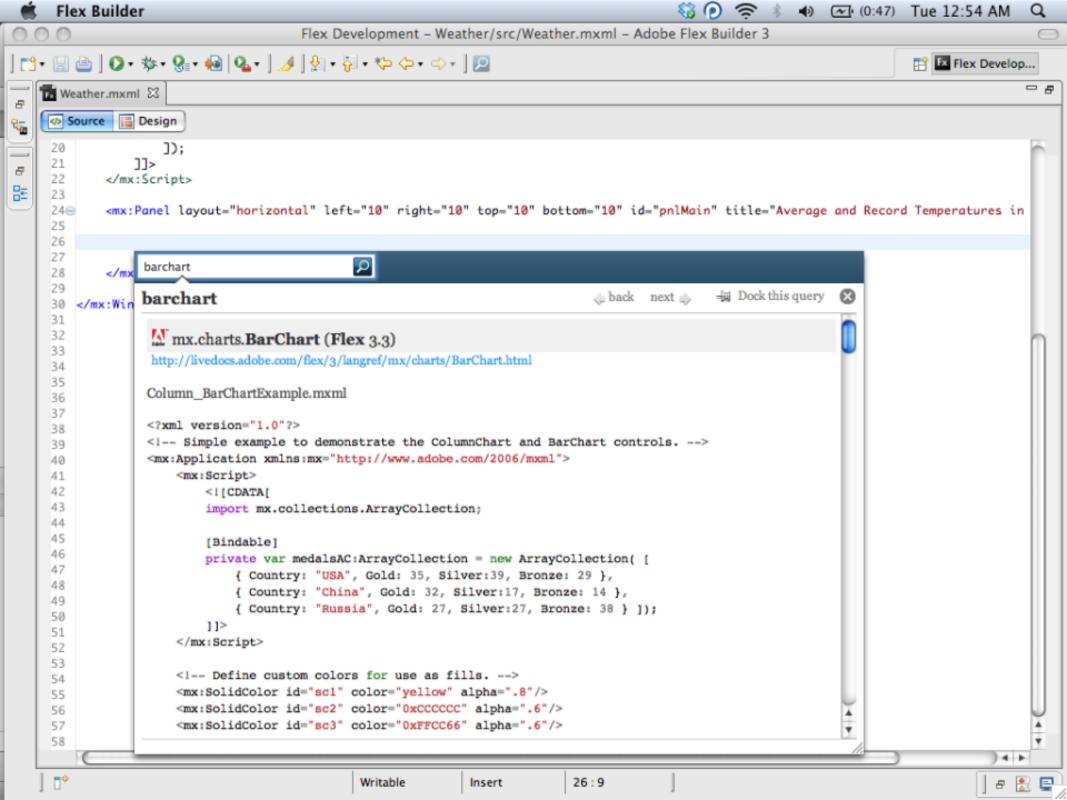


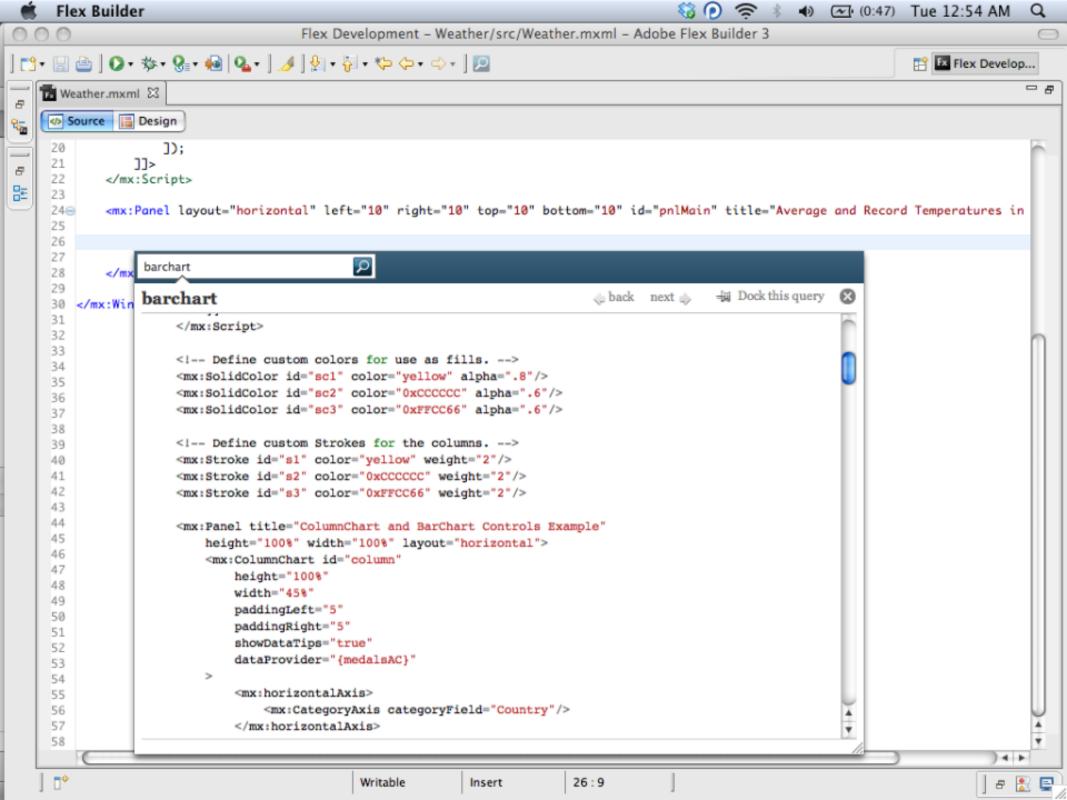


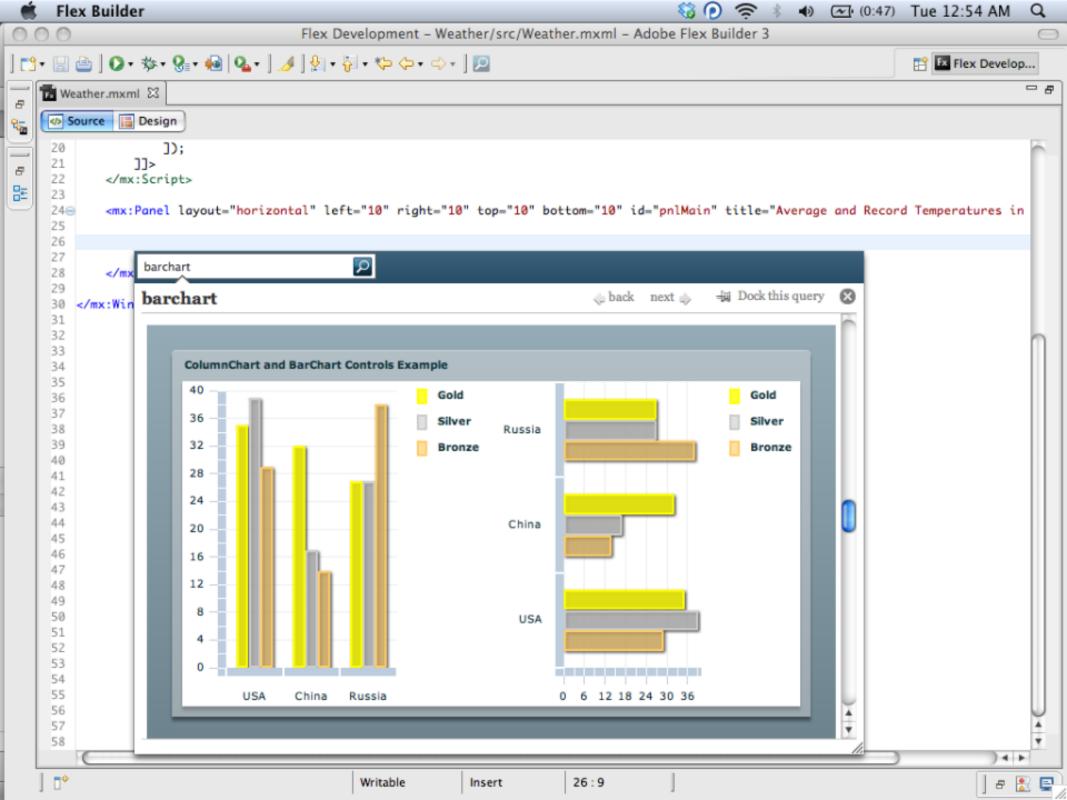


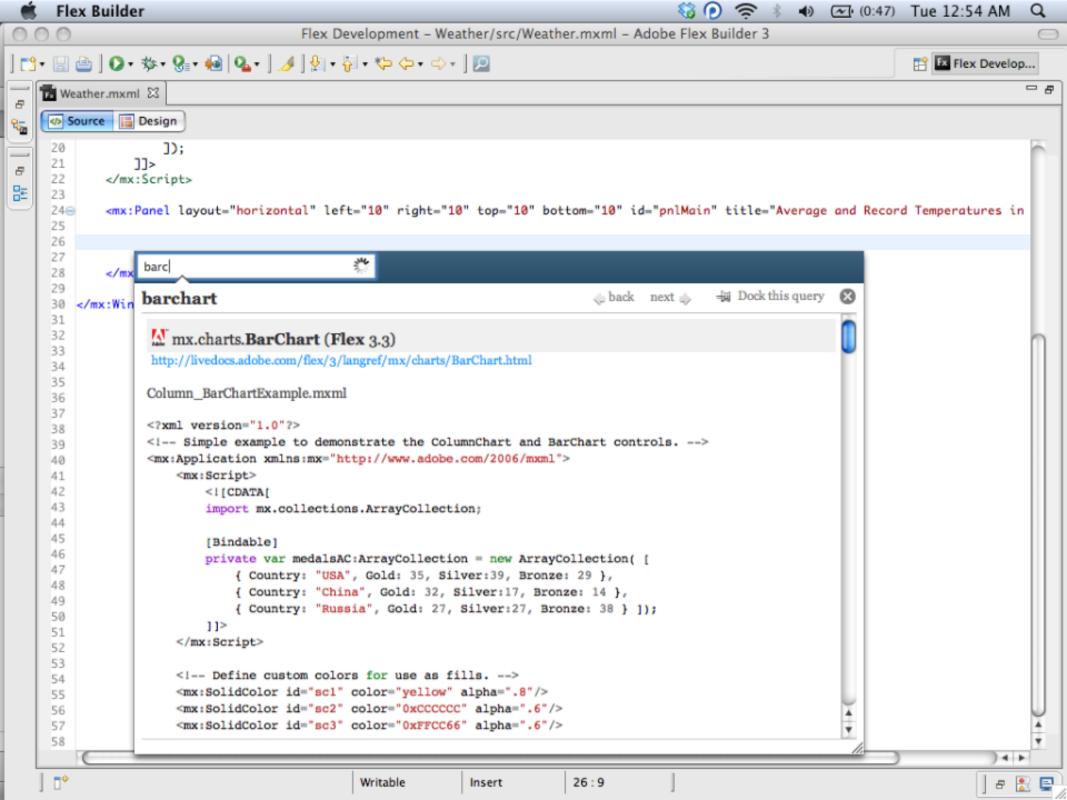


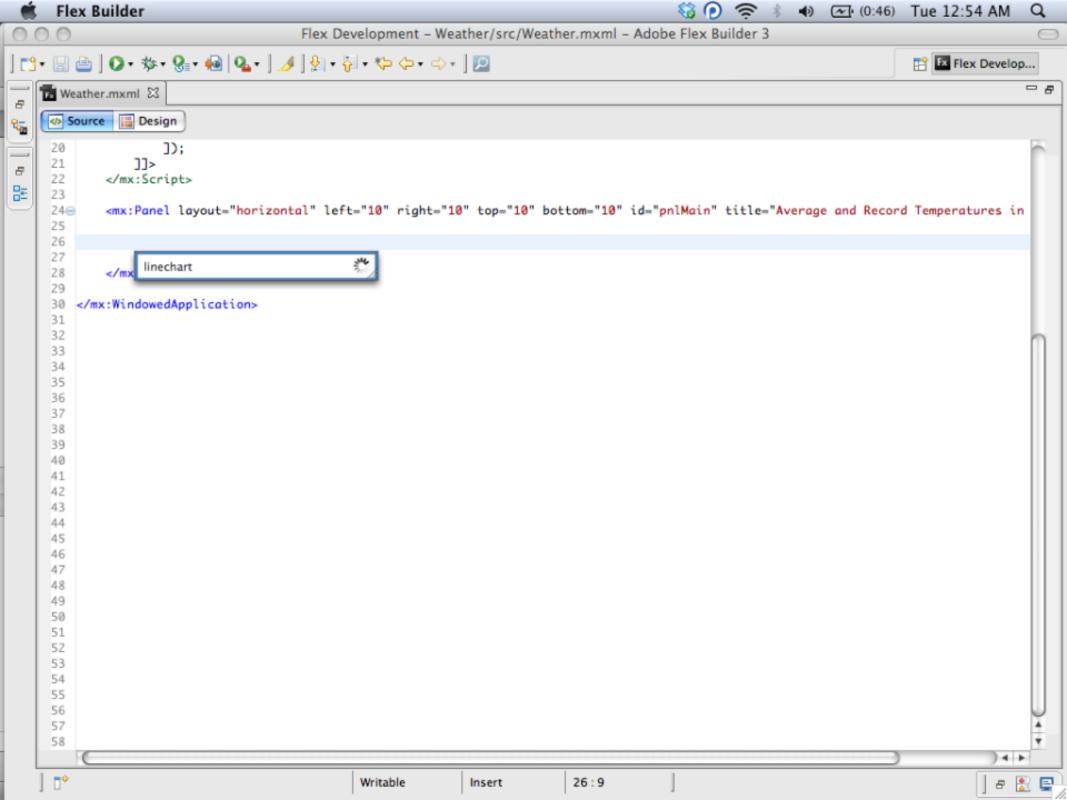


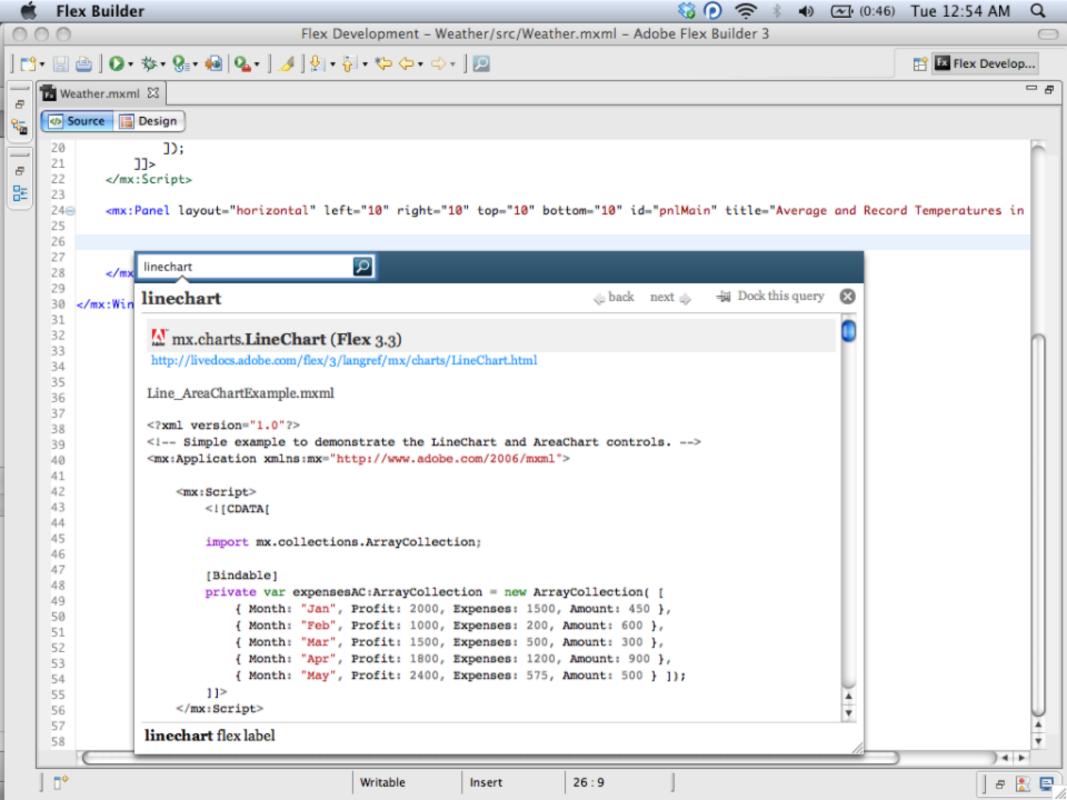


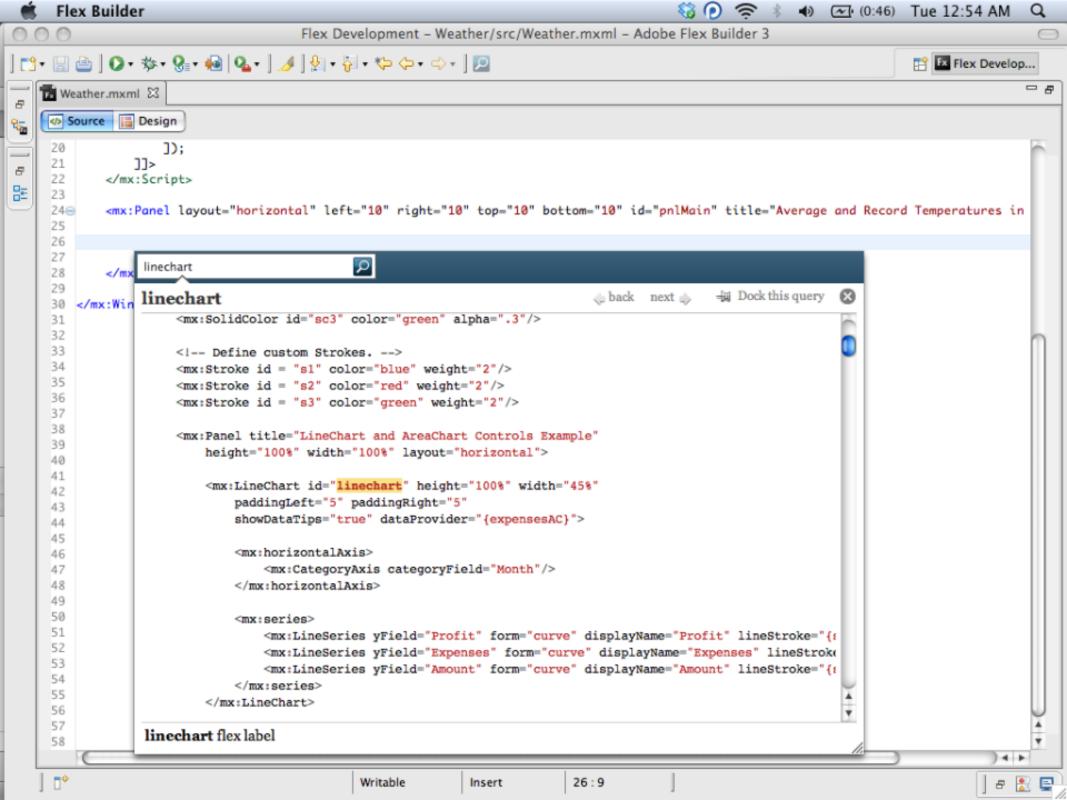


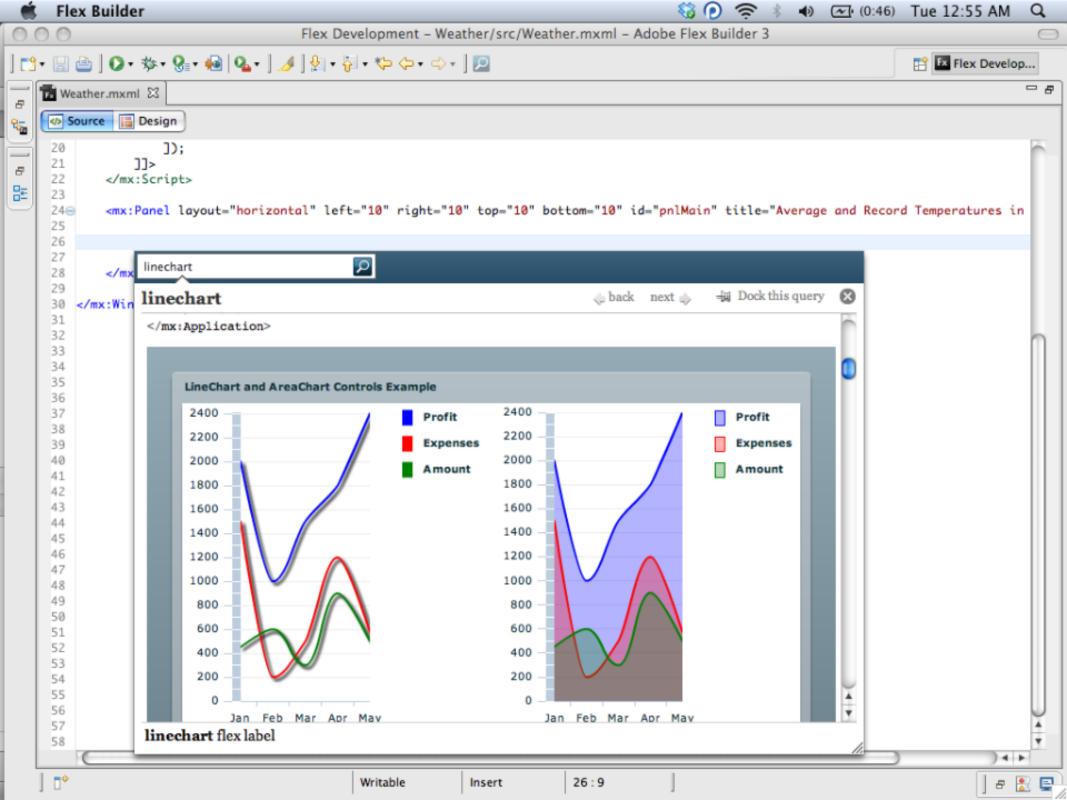


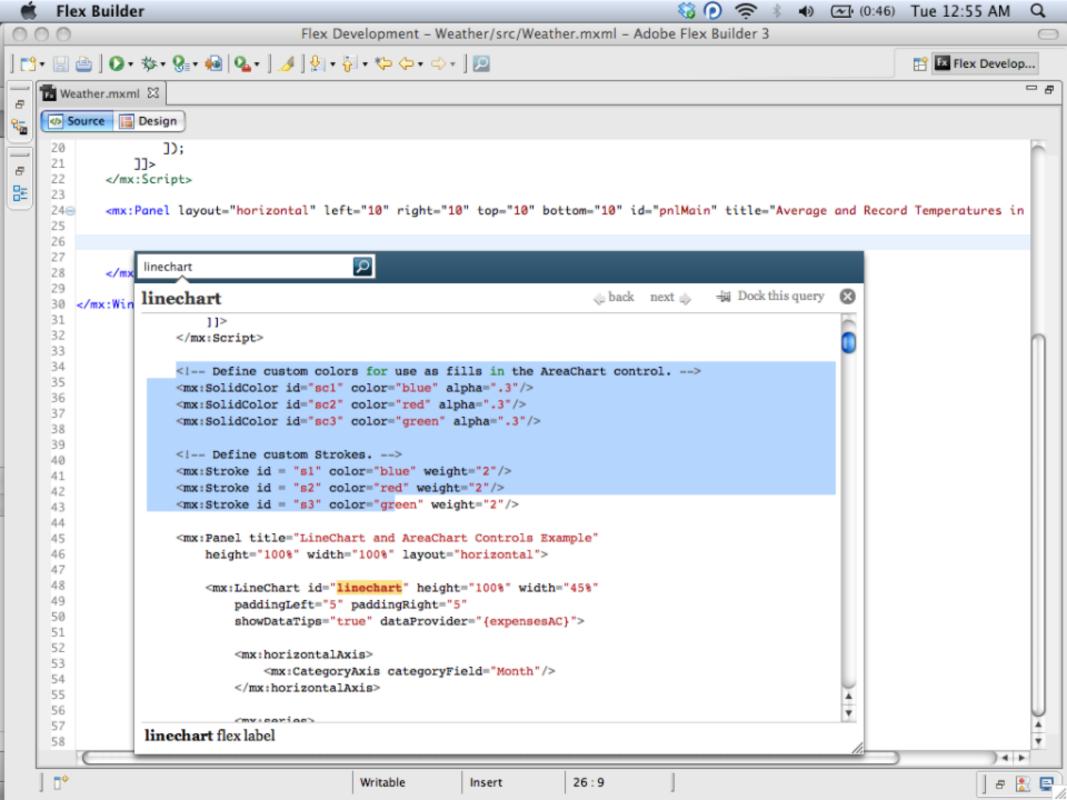


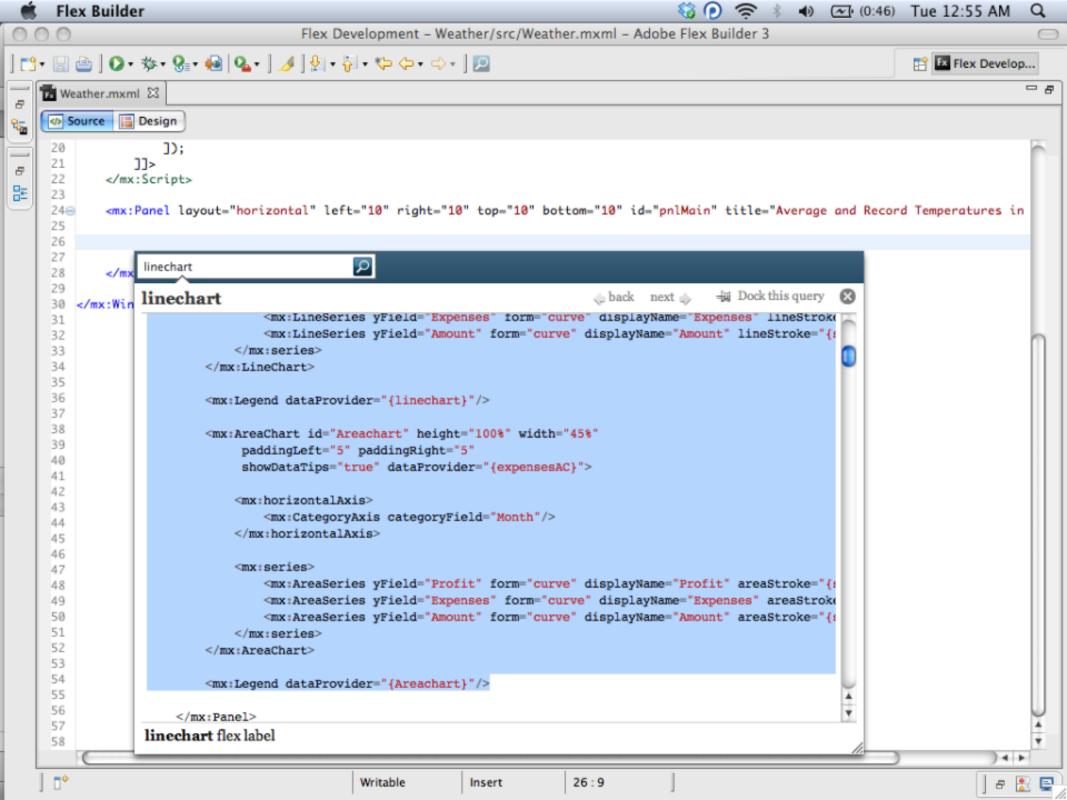


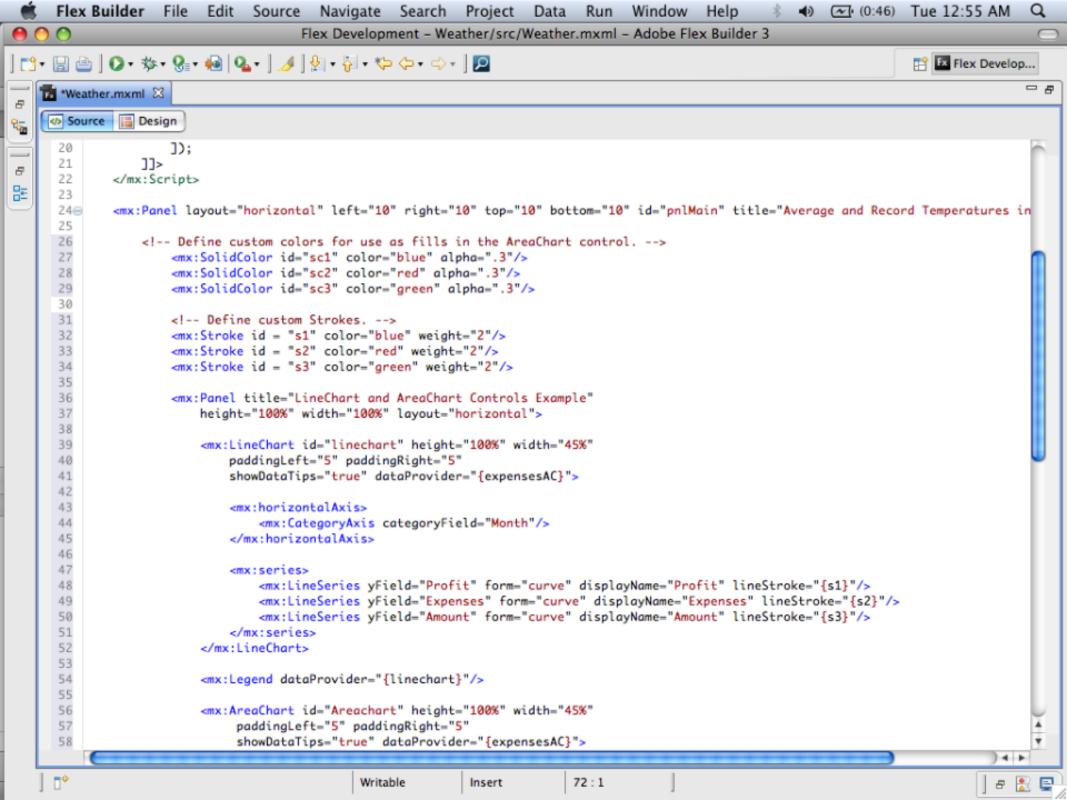


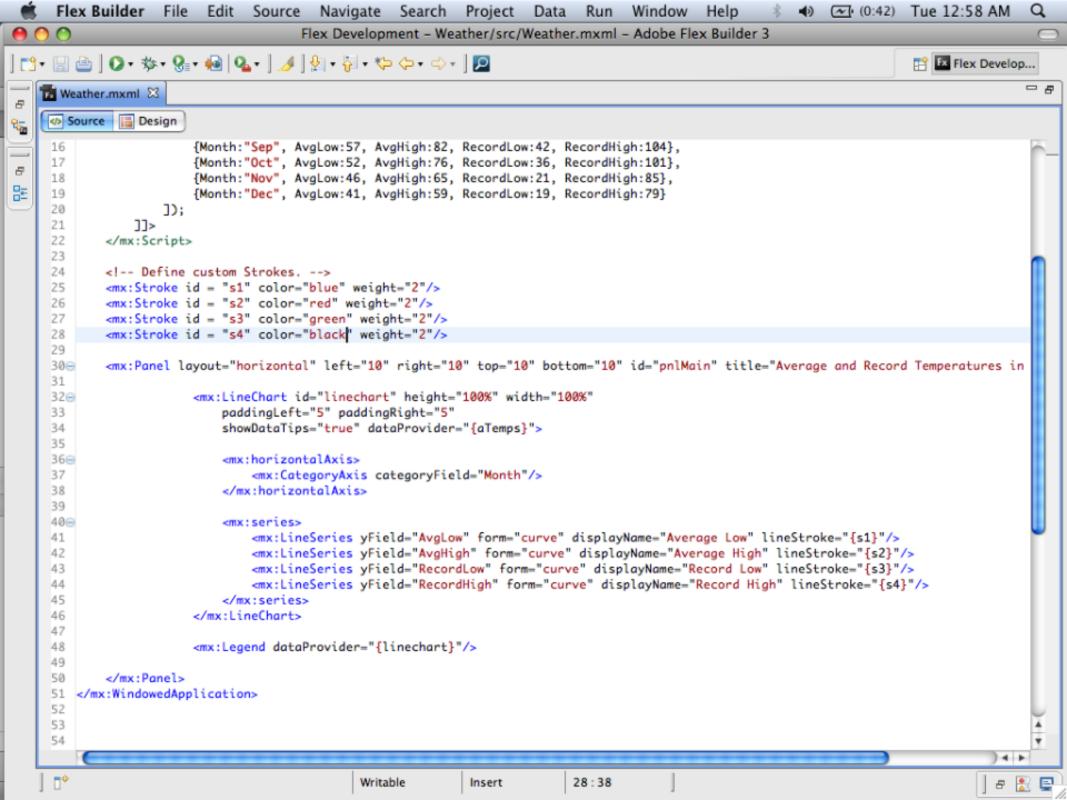


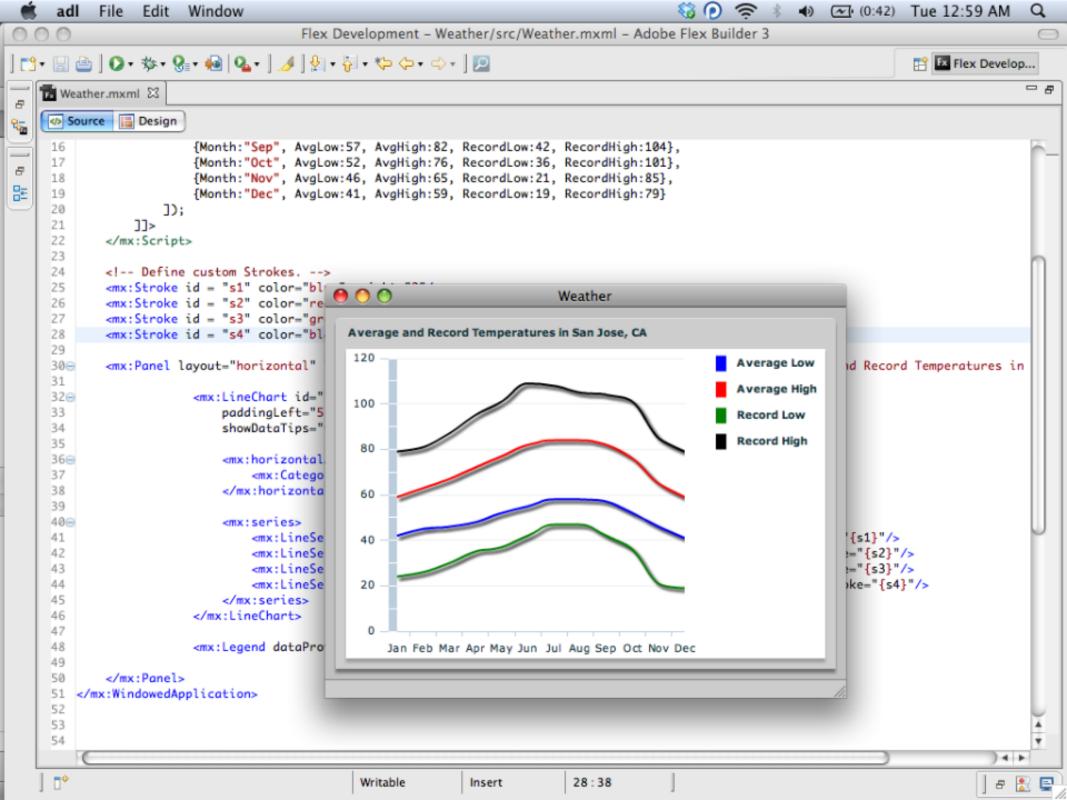










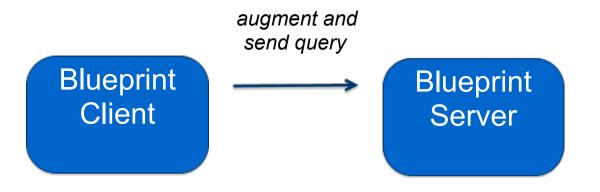




Blueprint Client

Blueprint Server Google
Custom Search



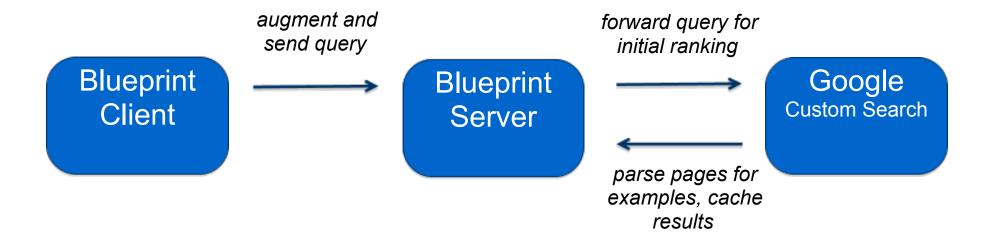


Google
Custom Search

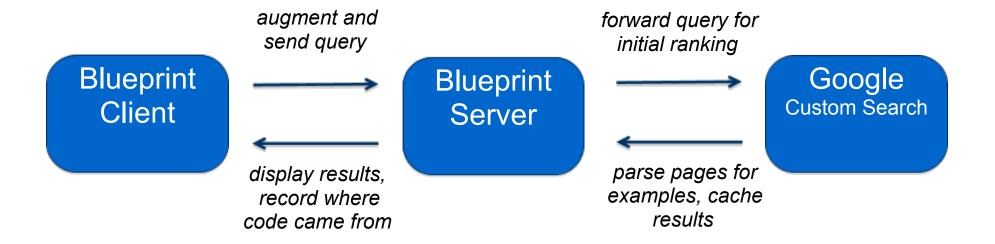
















Participants found code twice as fast...



Participants found code twice as fast...





Participants found code twice as fast...



...and wrote significantly better code



Participants found code twice as fast...



...and wrote significantly better code



Participants found code twice as fast... fastest slowest ...and wrote significantly better code best worst



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