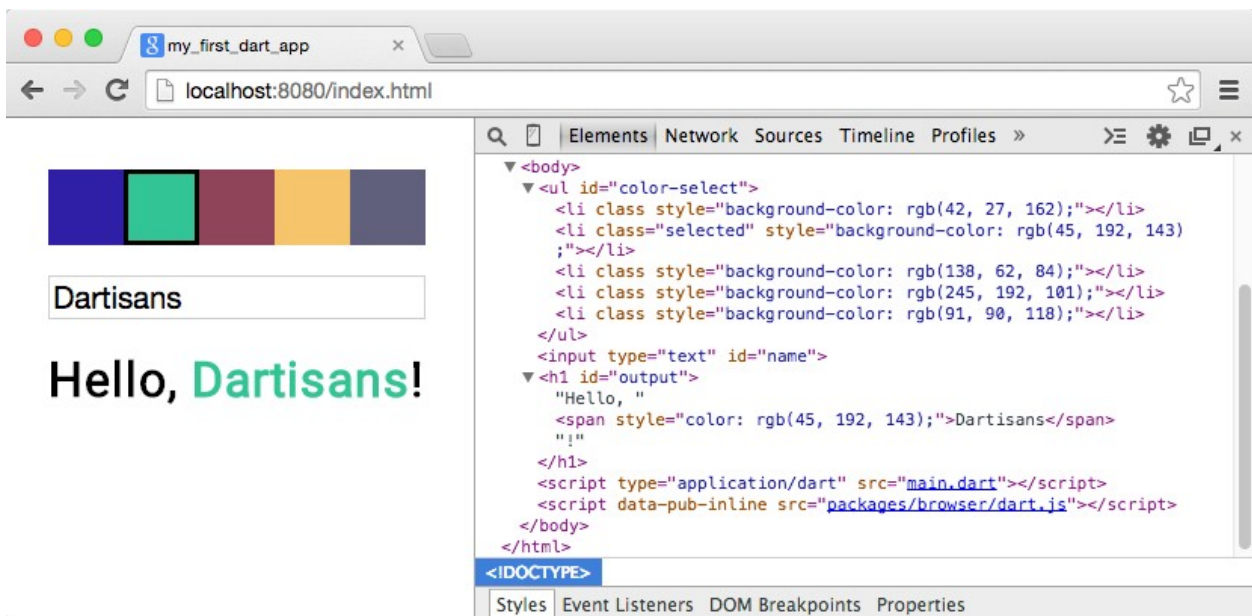
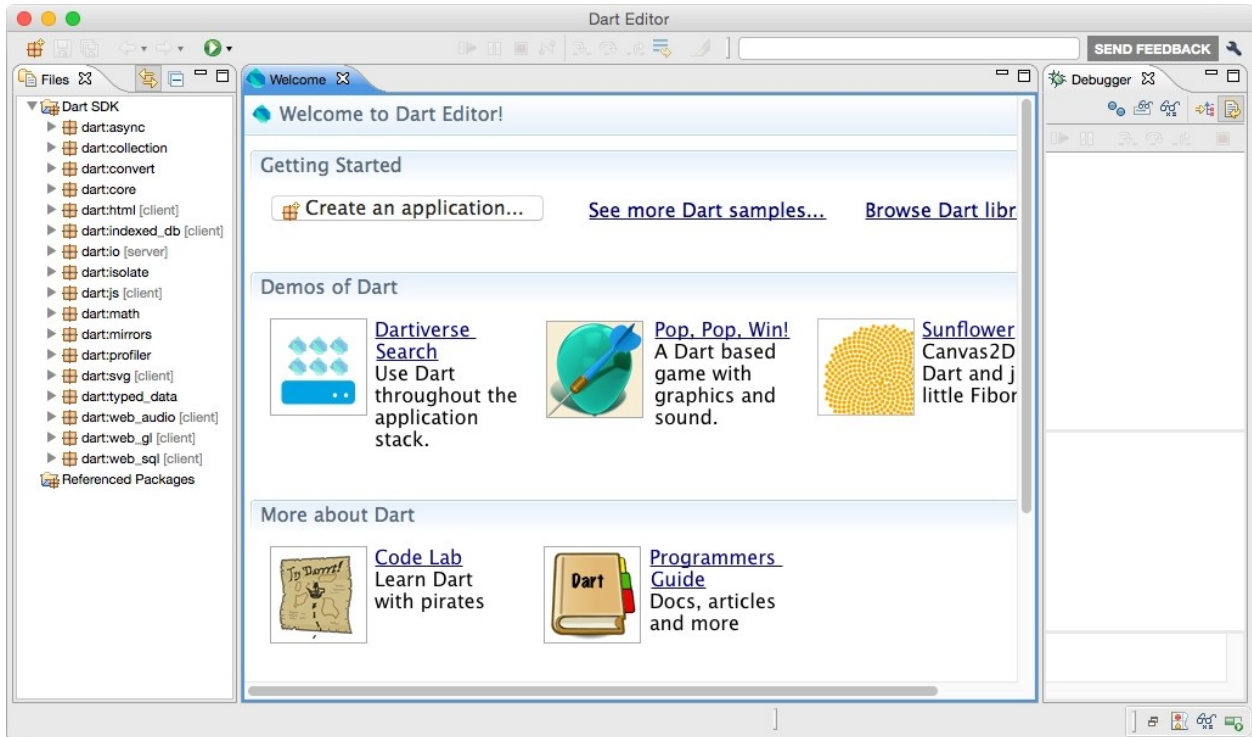
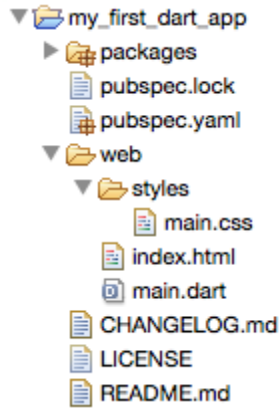


# Chapter 1





Paused in debugger

localhost:8080/index.html

Elements Network Sources Timeline Profiles

```
main.dart x
49 // Iterate all colors and create <li> element for each of them.
50 gm.generateColors(5).forEach((String color) {
51   LIElement elm = new LIElement();
52   // Set the background color.
53   elm.style.backgroundColor = "#${color}";
54
55   // Bind listener onClick event.
56   elm.onClick.listen((e) {
57     gm.setTextColor(elm.style.backgroundColor);
58     ul.querySelectorAll('li').classes.remove('selected');
59     elm.classes.add('selected');
60   });
}
```

Line 57, Column 50

Scope Variables Watch Expressions

Paused on a Dart breakpoint.

Breakpoints

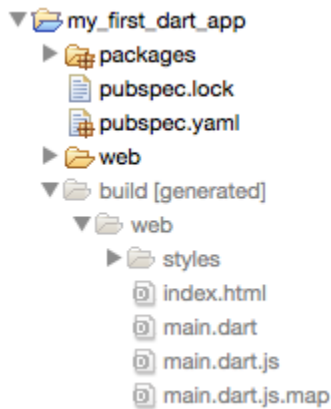
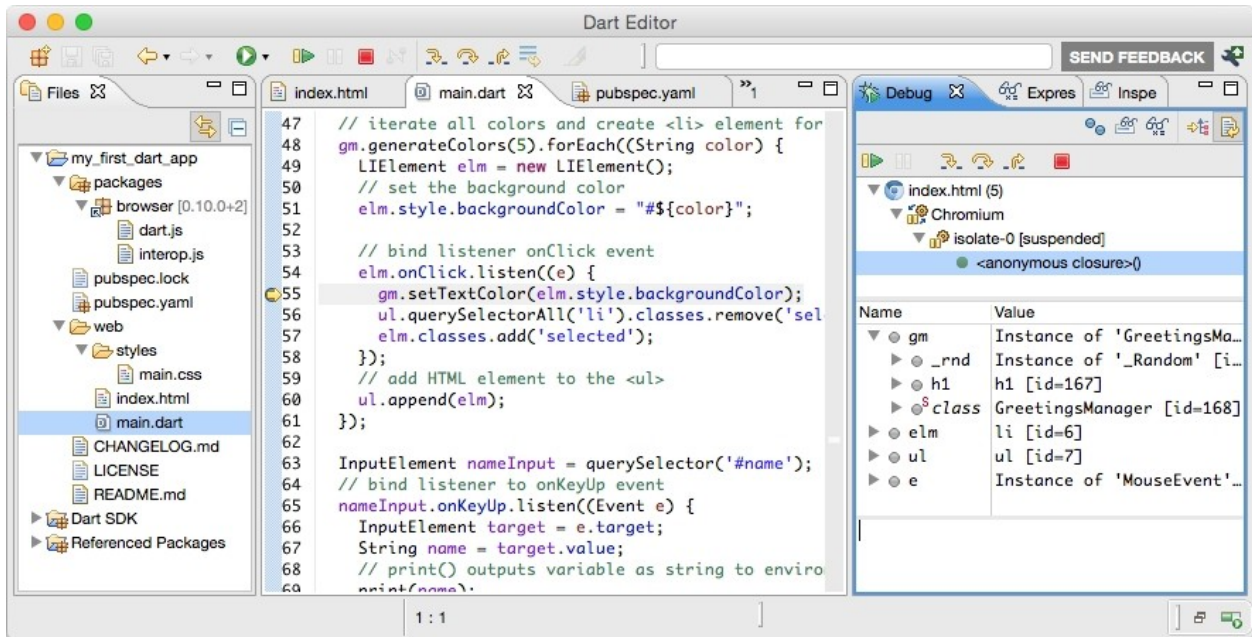
- main.dart:57 gm.setTextColor(elm.style...

DOM Breakpoints

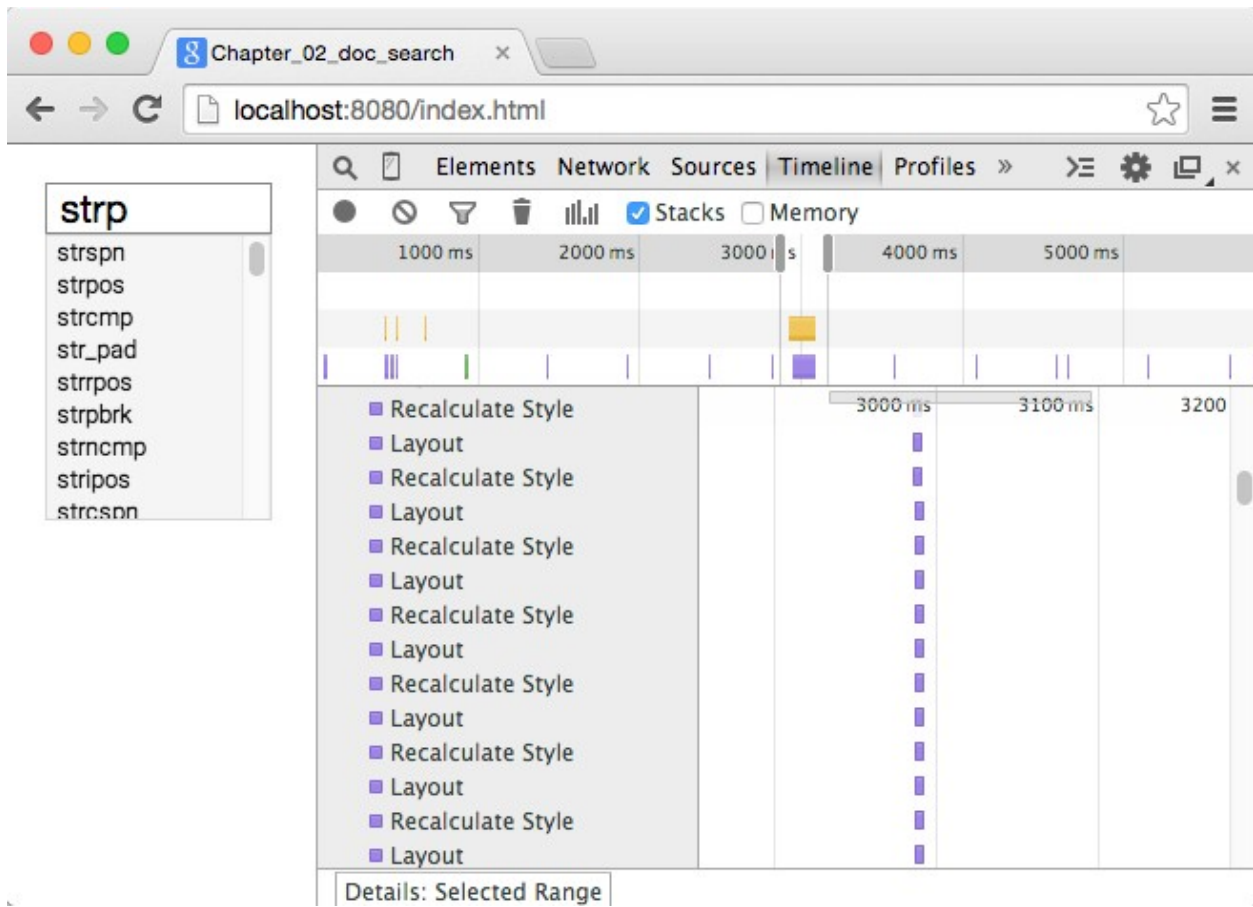
Local

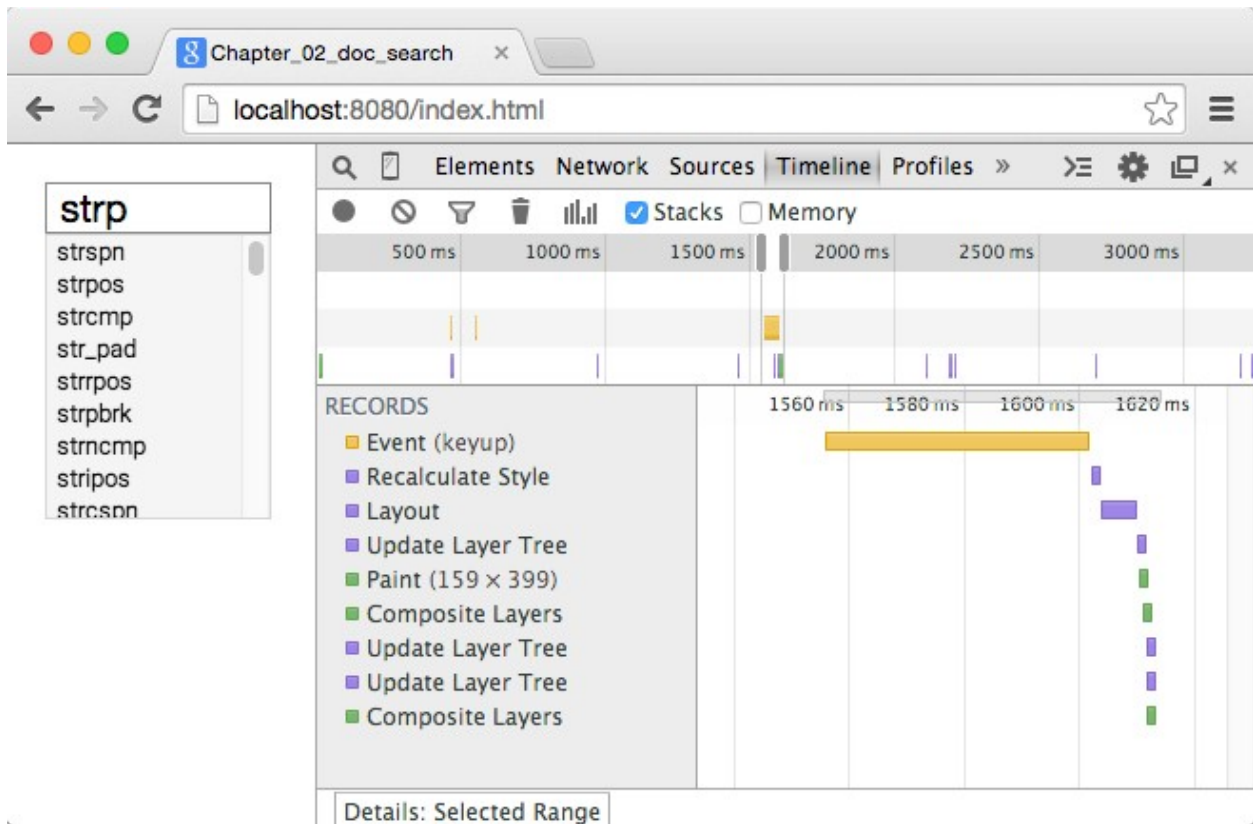
- e: Instance of 'MouseEvent'
- elm: li
- gm: Instance of 'GreetingsManager'
- ul: ul

Library http://localhost:8080/...

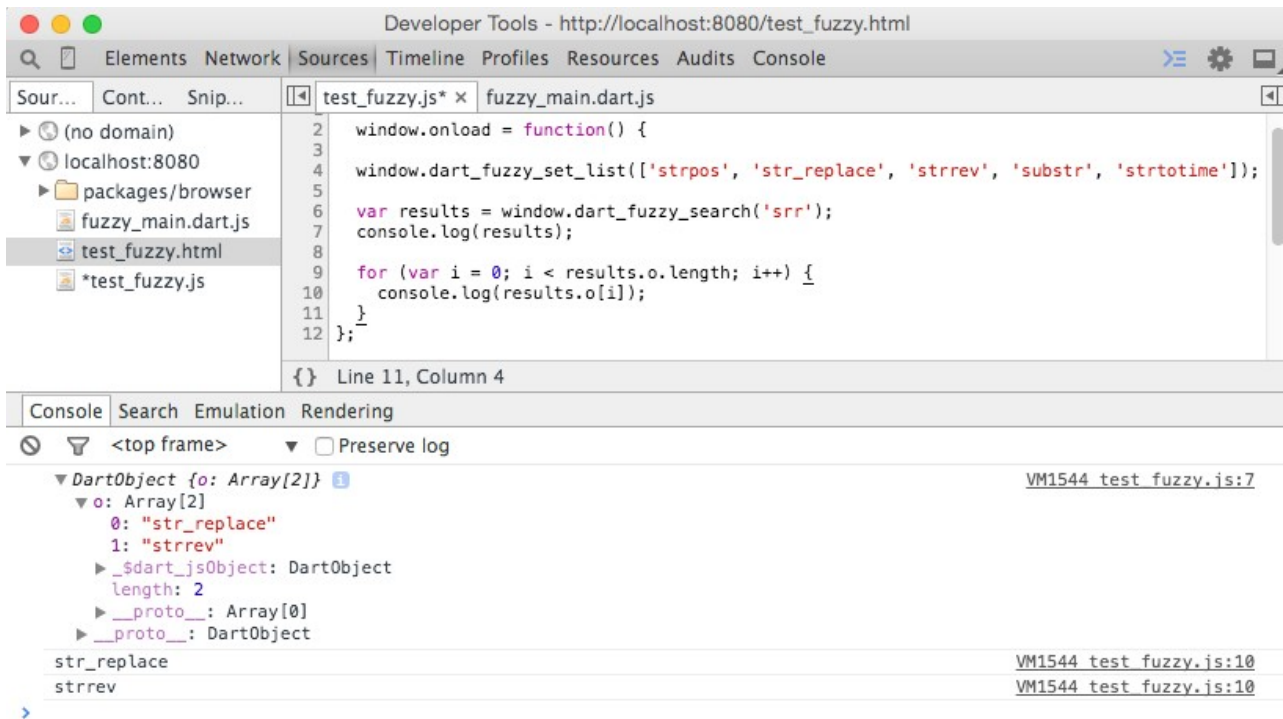
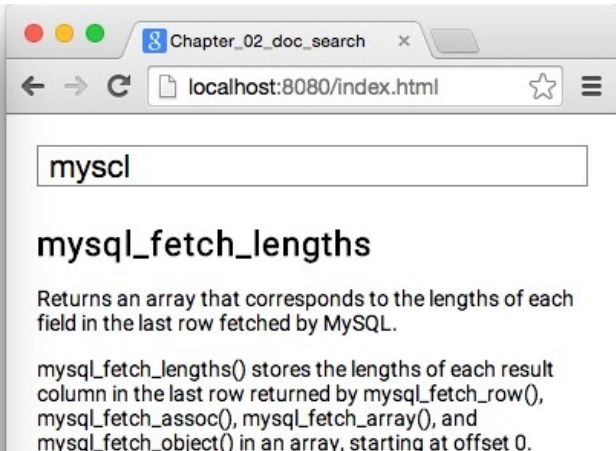
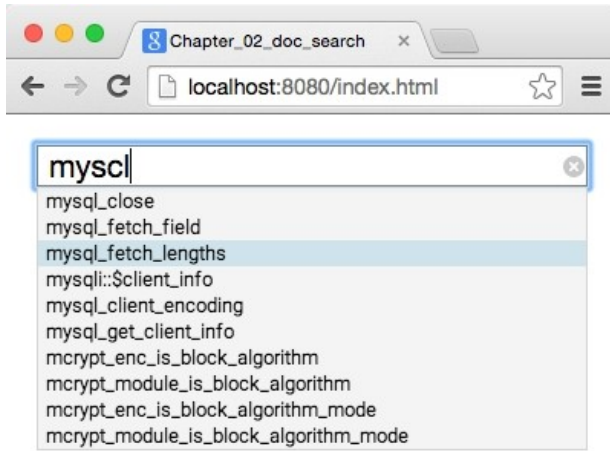


## Chapter 2

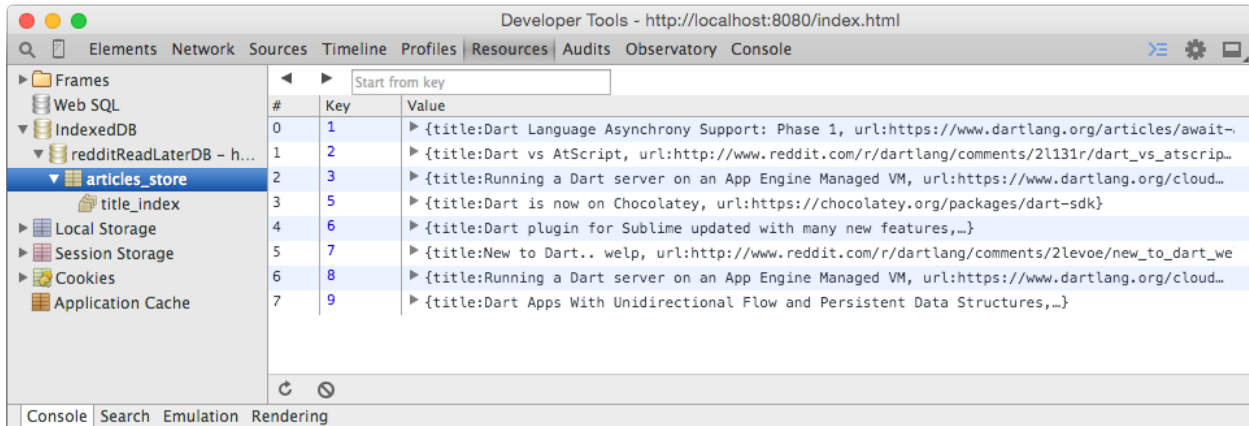
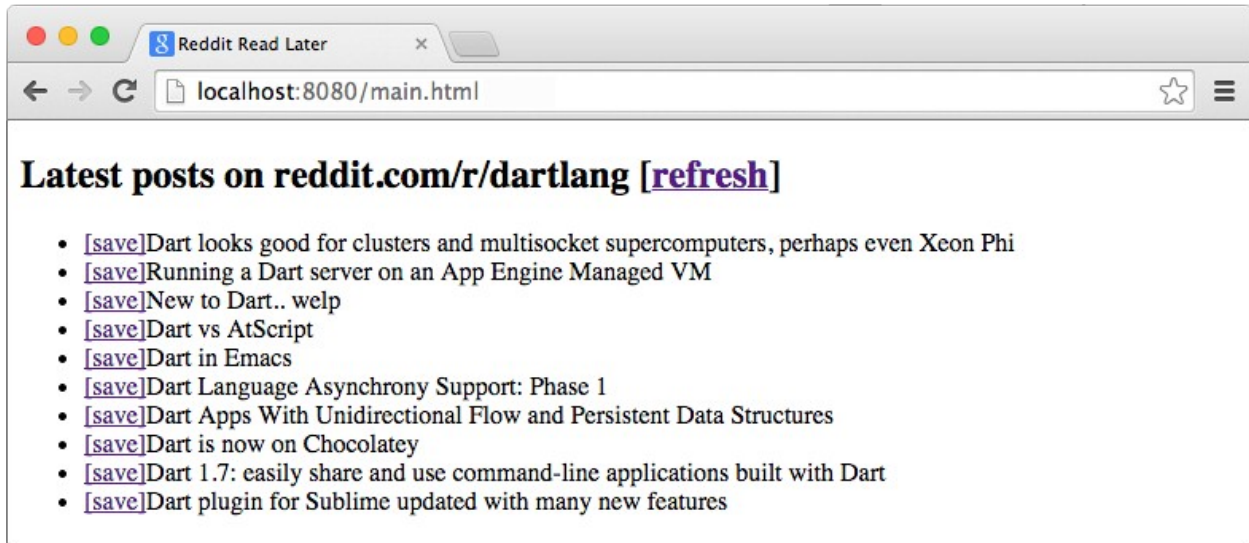


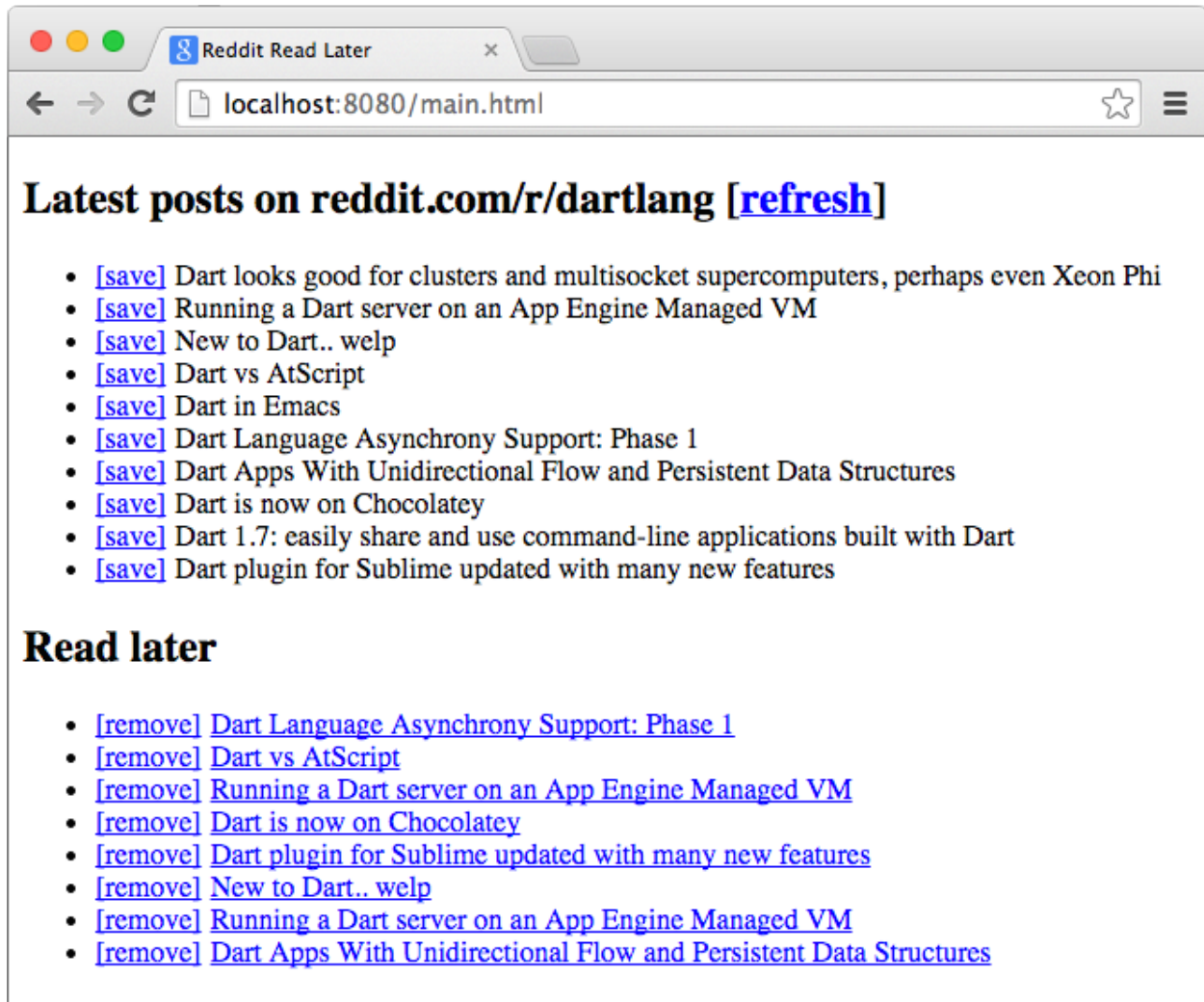


- ▼ Chapter\_02\_doc\_search
  - ▼ packages
    - ▶ browser [0.10.0+2]
    - ▶ Chapter\_02\_doc\_search
  - pubspec.lock
  - pubspec.yaml
  - ▼ lib
    - ▼ src
      - ▢ fuzzy\_search.dart
      - ▢ fuzzy.dart [fuzzy]



## Chapter 3





Reddit Read Later

localhost:8080/main.html

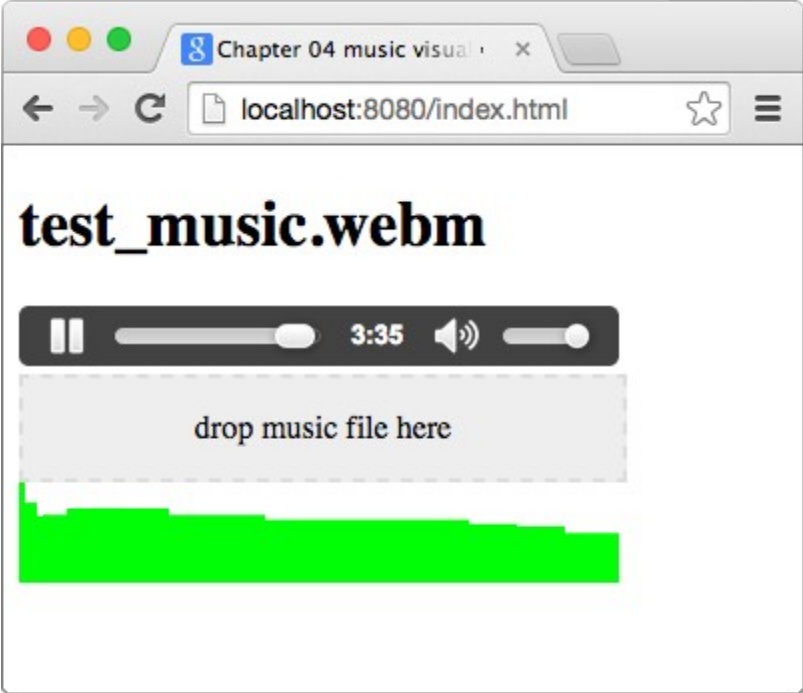
## Latest posts on reddit.com/r/dartlang [[refresh](#)]

- [\[save\]](#) Dart looks good for clusters and multiset socket supercomputers, perhaps even Xeon Phi
- [\[save\]](#) Running a Dart server on an App Engine Managed VM
- [\[save\]](#) New to Dart.. welp
- [\[save\]](#) Dart vs AtScript
- [\[save\]](#) Dart in Emacs
- [\[save\]](#) Dart Language Asynchrony Support: Phase 1
- [\[save\]](#) Dart Apps With Unidirectional Flow and Persistent Data Structures
- [\[save\]](#) Dart is now on Chocolatey
- [\[save\]](#) Dart 1.7: easily share and use command-line applications built with Dart
- [\[save\]](#) Dart plugin for Sublime updated with many new features

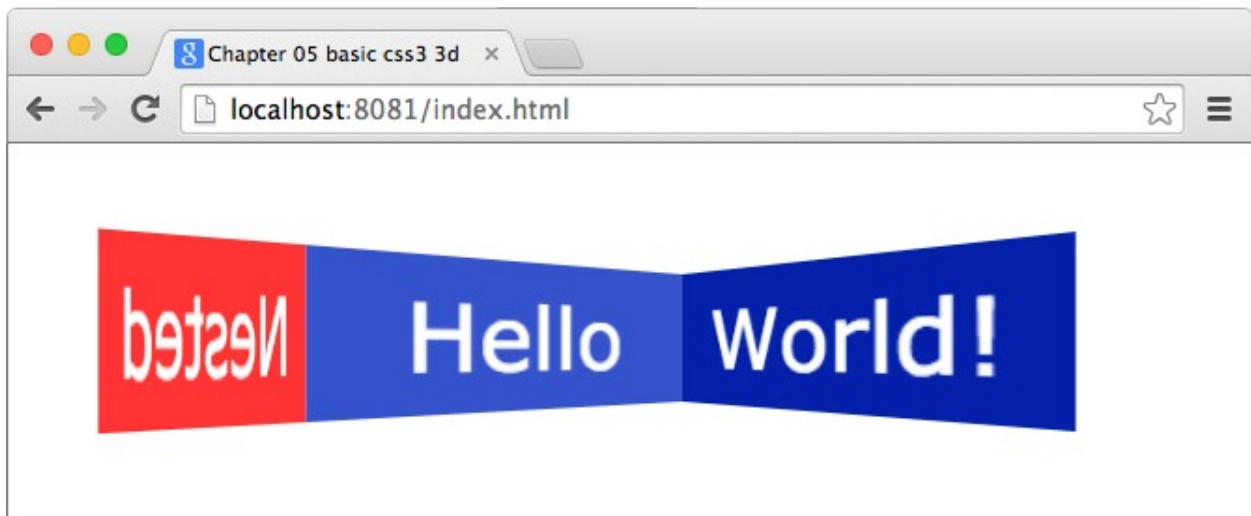
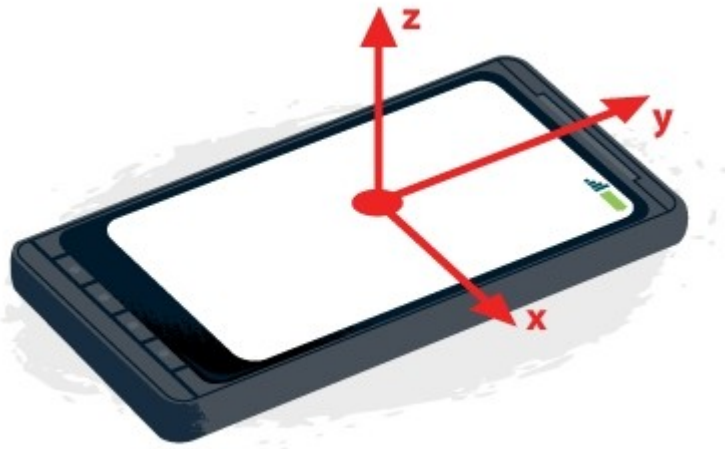
## Read later

- [\[remove\]](#) [Dart Language Asynchrony Support: Phase 1](#)
- [\[remove\]](#) [Dart vs AtScript](#)
- [\[remove\]](#) [Running a Dart server on an App Engine Managed VM](#)
- [\[remove\]](#) [Dart is now on Chocolatey](#)
- [\[remove\]](#) [Dart plugin for Sublime updated with many new features](#)
- [\[remove\]](#) [New to Dart.. welp](#)
- [\[remove\]](#) [Running a Dart server on an App Engine Managed VM](#)
- [\[remove\]](#) [Dart Apps With Unidirectional Flow and Persistent Data Structures](#)





Chapter 4







Elements Network Sources Timeline Profiles »

```

    <div class="book dune-old">
      <div class="front"></div>
      <div class="left"></div>
      <div class="right"></div>
      <div class="back"></div>
      <div class="top"></div>
      <div class="bottom"></div>
    </div>
  
```

html body div#book-container div.book.dune-old **div.left**

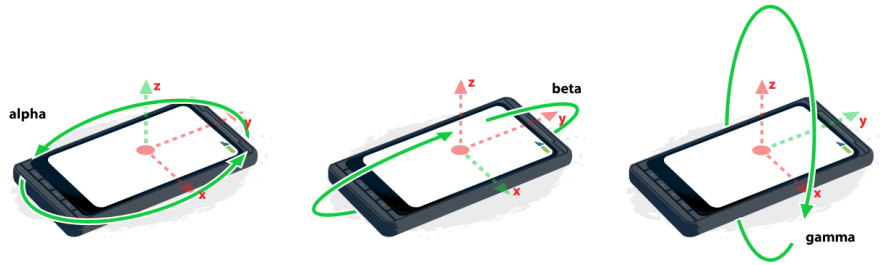
Styles Event Listeners DOM Breakpoints Properties

```

    .book > .left {
      width: 30px;
      transform-origin: 0 0;
      transform: rotateY(-90deg) translateX(-15px)
        translateZ(0px);
    }
  
```

position: absolute; width: 100%; height: 100%;

position: absolute; margin: 0; border: 1px solid black; padding: 5px; width: 30px; height: 230px; text-align: center; line-height: 230px;">30 x 230



α:   
 β:   
 γ:

Reset

α:   
 β:   
 γ:

Reset

**X-wing**

47 shapes, 297 face

Short URL

Click to generate URL!

Embed

PREVIEW

EDITOR

### Get code

**HTML**

```
<div class="face tp">
  <div class="photon-t
</div>
</div>
<div class="shape prism-
<div class="face ft">
  <div class="photon-s
</div>
<div class="face bk">
  <div class="photon-s
</div>
<div class="face-wrap
<div class="face">
  <div class="photon
```

**CSS (Unprefixed)**

```
/* /\ You need to add
perspective: 800px;
position: absolute;
overflow: hidden;
width: 100%;
height: 100%;
background: #08182f;
font-size: 100%;
}
.face {
  box-shadow: inset 0
}
.scene, .shape, .face,
```

Edit on CodePen

**ZOOM**

zoom 100

**LIGHTING**

☒
☑
☀
↺

dark .4

light 0,18

**BORDERS**

opacity 1

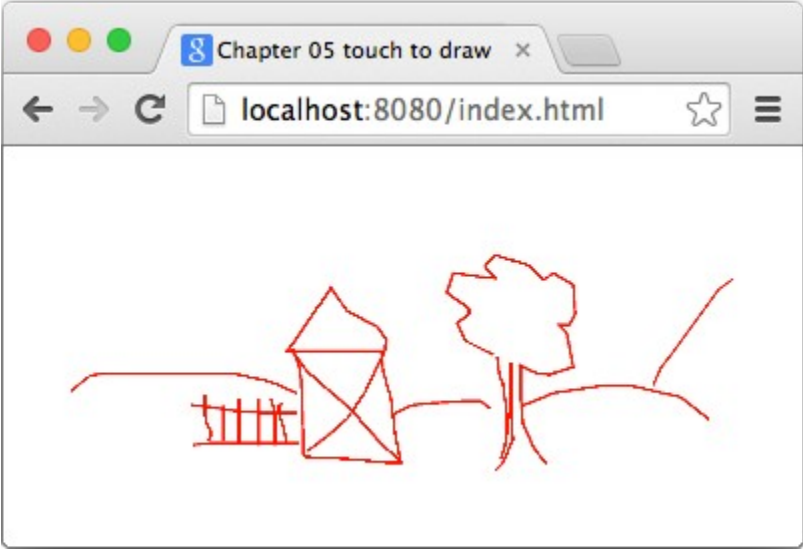
**BACKGROUND**

color #08182f

Made with ❤ by Julian Garnier

**Total distance: 775m, distance from last position: 14.9** Start Stop

Map data ©2014 Google Terms of Use



The browser window shows a page with the text "Hello, imported world!". The developer tools are open to the Elements panel, showing the following HTML structure:

```
<script async src="packages/web_components/webcomponents.js"></script>
<script async type="application/dart" src="main.dart"></script>
<script async src="packages/browser/dart.js"></script>
<link id="linkedCont" rel="import" href="greeting.html">
  #document
  #html
    #head
    #body
      #div
        #h1
          Hello, imported world!
        #div
          Hello, imported world!
    #div
      #h1
        Hello, imported world!
```

The browser window shows a page with the text "Greeting here" and "Hello, imported world!". The developer tools are open to the Elements panel, showing the following HTML structure:

```
<link id="linkedCont" rel="import" href="greeting.html">
  #document
  #html
    #head
      #style
        #h1
          color: red;
        #h2
          color: green;
      #div
        #h1
          Hello, imported world!
    #div
      #h2
        Greeting here
      #div
        #h1
          Hello, imported world!
```

The screenshot shows a web browser window with the following content:

- Page title: Chapter 06 link import sha...
- Address bar: localhost:8080/index.html
- Page content:
  - Greeting here** (green text)
  - Hello, imported world!** (blue text)
- Developer Console (Elements panel):
  - Tree structure:
    - <link rel="import" href="greeting.html" id="myElementLink">
    - #document
      - <html>
        - <head>
          - <template>
            - #document-fragment
              - <style>
                - h1 { color: blue; }
                - h2 { color: yellow !important; }
              - </style>
              - <h1>Hello, imported world!</h1>
            - </template>
          - </head>
          - <body></body>
        - </html>
      - </link>
      - <style>
        - h1 { color: red !important; }
        - h2 { color: green; }
      - </style>
      - </head>
      - <body>
        - <h2>Greeting here</h2>
        - <!-- We'll create Shadow DOM in this element. -->
        - <div>
          - #shadow-root
            - <style>
              - h1 { color: blue; }
              - h2 { color: yellow !important; }
            - </style>
            - <h1>Hello, imported world!</h1>

The bottom of the console shows tabs for **html**, **Styles**, **Event Listeners**, **DOM Breakpoints**, and **Properties**.



The browser window shows a page titled "Chapter 06 link import scr" at the URL "localhost:8081/index.html". The page content includes a blue "Hello, world!" heading, an "Add" button, and three red "Template" headings, each followed by "Lorem ipsum" text. The developer tools are open to the "Elements" tab, showing the following HTML structure:

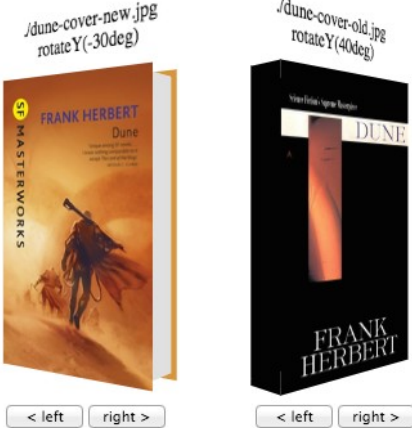
```
<head>...</head>
<body>
  <h1>Hello, world!</h1>
  <button>Add</button>
  <my-greeting>
    #shadow-root
      <style>
        h1 { color: yellow; }
        h2 { color: red; }
      </style>
      <h2>Template</h2>
      <p id="content">Lorem ipsum</p>
    </my-greeting>
  <my-greeting custom-attribute="Hello">
    #shadow-root
      <style>
        h1 { color: yellow; }
        h2 { color: red; }
      </style>
      <h2>Template</h2>
      <p id="content">Hello</p>
    </my-greeting>
  <my-greeting>...</my-greeting>
</body>
```

The browser window shows a page titled "Chapter 06 polymer simpli" at the URL "localhost:8080/index.html". The page content features a large black "Hello polymer.dart!" heading. The developer tools are open to the "Elements" tab, showing the following HTML structure:

```
<!DOCTYPE html>
<html>
  <head>...</head>
  <body>
    <div hidden>...</div>
    <!--<h1>Chapter 06 polymer simple</h1-->
    <my-element>
      #shadow-root
        | <h1>Hello polymer.dart!</h1>
      </my-element>
    <script type="application/dart" src="index.html_bootstrap.dart"></script>
    <script src="packages/browser/dart.js"></script>
  </body>
</html>
```

Chapter 06 polymer data t x

localhost:8081/index.html




```
<!DOCTYPE html>
<html>
  <head>...</head>
  <body>
    <div hidden>...</div>
    <!--<h1>Chapter 06 polymer data binding</h1>-->
    <one-way-book cover-image="./dune-cover-new.jpg" base-color="#da944c">
      <#shadow-root
        <style>...</style>
        <div style="transform: rotateY(-30deg);">
          <p id="name">...</p>
          <div class="front" style="background-image: url(../dune-cover-new.jpg)"></div>
          <div class="left" style="background: rgb(218, 148, 76);"></div>
          <div class="right"></div>
          <div class="back" style="background: rgb(218, 148, 76);"></div>
          <div class="top"></div>
          <div class="bottom"></div>
        </div>
        <p id="buttons">...</p>
      </one-way-book>
    <one-way-book cover-image="./dune-cover-old.jpg" base-color="#000">...</one-way-book>
  </body>
</html>
```

Styles | Event Listeners | DOM Breakpoints | Properties

Chapter 06 polymer two w x

localhost:8080/index.html

**input value 50**



Chapter\_06\_polymer\_core x  
localhost:8080/index.html

#321684: Hello, World!  
#321685: Hello, World!  
#321686: Hello, World!  
#321687: Hello, World!  
#321688: Hello, World!  
#321689: Hello, World!  
#321690: Hello, World!  
#321691: Hello, World!  
#321692: Hello, World!  
#321693: Hello, World!  
#321694: Hello, World!  
#321695: Hello, World!  
#321696: Hello, World!  
#321697: Hello, World!  
div 205px x 24px World!  
#321699: Hello, World!  
#321700: Hello, World!  
#321701: Hello, World!  
#321702: Hello, World!  
#321703: Hello, World!

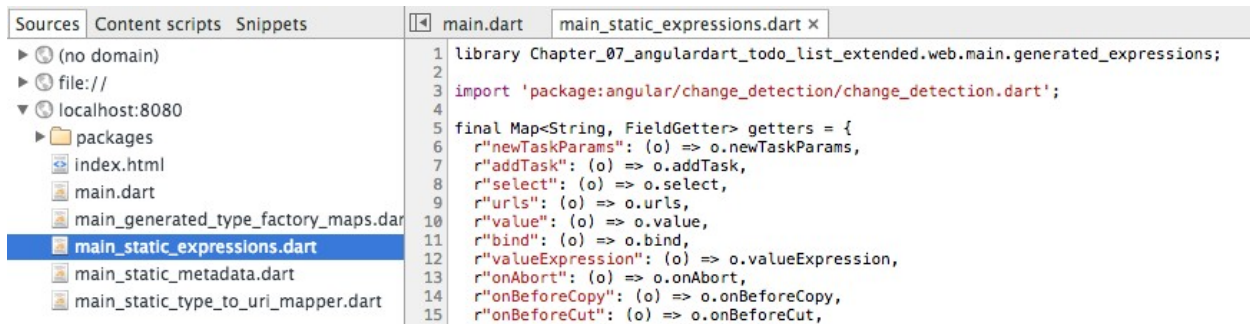
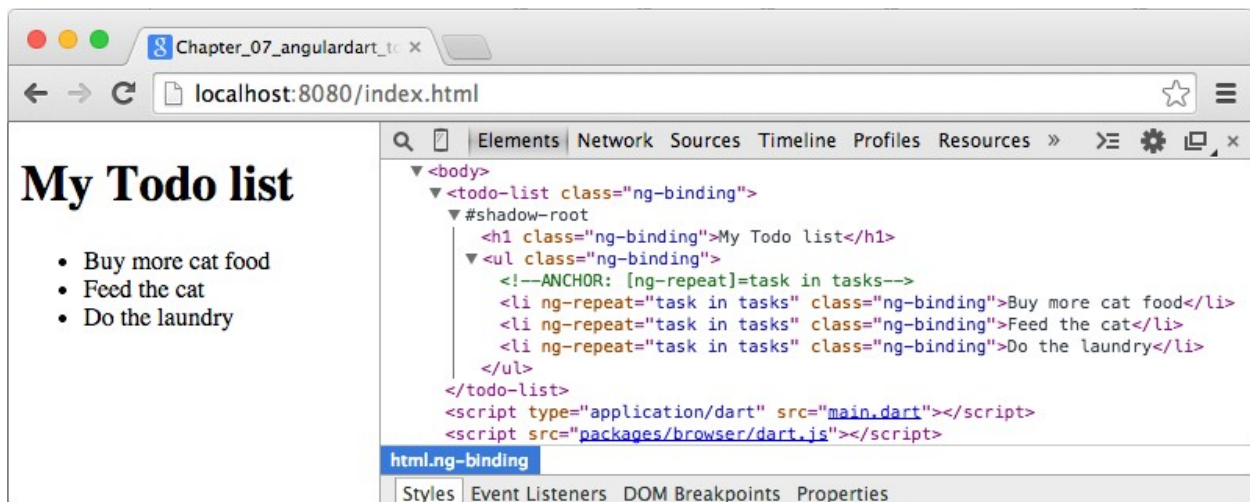
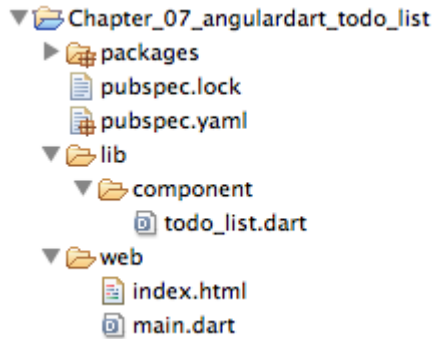
Elements Network Sources Timeline Profiles Resources Audits Console

```
<main-app>
  #shadow-root
    <style>
      #list { height: 100%; }
      #list div { padding: 3px; }
    </style>
    <core-list-dart id="list" data="{{largeList}}" style="will-change: transform; box-sizing: border-box; overflow-y: auto;">
      #shadow-root
        <template repeat>...</template>
        <div style="opacity: 1; -webkit-transform: translate3d(0px, 7720704px, 0px); transform: translate3d(0px, 7720704px, 0px);">...</div>
        <div style="opacity: 1; -webkit-transform: translate3d(0px, 7720728px, 0px); transform: translate3d(0px, 7720728px, 0px);">
          <span>#321697: </span>
          <span style="color:#e31228">Hello, World!</span>
        </div>
        <div style="opacity: 1; -webkit-transform: translate3d(0px, 7720752px, 0px); transform: translate3d(0px, 7720752px, 0px);">...</div>
        <div style="opacity: 1; -webkit-transform: translate3d(0px, 7720776px, 0px); transform: translate3d(0px, 7720776px, 0px);">...</div>
        <div style="opacity: 1; -webkit-transform: translate3d(0px, 7720800px, 0px); transform: translate3d(0px, 7720800px, 0px);">...</div>
        <div style="opacity: 1; -webkit-transform: translate3d(0px, 7720824px, 0px); transform: translate3d(0px, 7720824px, 0px);">...</div>
        <div style="opacity: 1; -webkit-transform: translate3d(0px, 7720848px, 0px); transform: translate3d(0px, 7720848px, 0px);">...</div>
        <div style="opacity: 1; -webkit-transform: translate3d(0px, 7720872px, 0px); transform: translate3d(0px, 7720872px, 0px);">...</div>
        <div style="opacity: 1; -webkit-transform: translate3d(0px, 7720896px, 0px); transform: translate3d(0px, 7720896px, 0px);">...</div>
    </core-list-dart>
  </main-app>
```

html body main-app #shadow-root core-list-dart#list div

Styles Event Listeners DOM Breakpoints Properties

## Chapter 6



▼ Chapter\_07\_angulardart\_todo\_list\_extended

- ▶ packages
  - pubspec.lock
  - pubspec.yaml
- ▼ lib
  - ▼ component
    - todo\_detail.dart [todo\_detail]
    - todo\_detail.html
    - todo\_list.dart [todo\_list]
    - todo\_list.html
  - ▼ service
    - task.dart
  - ▼ web
    - ▼ view
      - add.html
      - detail.html
      - default\_tasks.json
      - index.html
      - main.dart

The screenshot shows a web browser window with the URL `localhost:8080/index.html#/detail/2`. The page content includes:

- # My Todo list
- ## detail
- Task details:
  - id: 2
  - when: 11:00
  - title: Feed the cat
- [add task](#)
- ## My tasks
- Search:
- Task list:
  - 11:00 - [Feed the cat](#) [remove]
  - 12:00 - [Buy more cat food](#) [remove]
  - 14:30 - [Buy a dog](#) [remove]
  - 17:15 - [Do the laundry](#) [remove]

The developer tools show the following DOM tree structure:

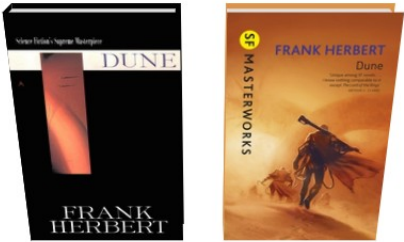
```
<body>
  <todo-list class="ng-binding">
    #shadow-root
      <h1 class="ng-binding">My Todo list</h1>
      <ng-view class="ng-binding">
        <h2 class="ng-binding">detail</h2>
        <todo-detail all-tasks="tasks" class="ng-binding">
          #shadow-root
            <ul class="ng-binding">
              <li class="ng-binding">id: 2</li>
              <li class="ng-binding">when: 11:00</li>
              <li class="ng-binding">title: Feed the cat</li>
            </ul>
          </todo-detail>
          <a ng-href="#/add" class="ng-binding" href="#/add">add task</a>
        </ng-view>
        <h2 class="ng-binding">My tasks</h2>
        Search: "
        <input type="search" ng-model="searchText" class="ng-binding ng-pristine ng-untouched">
        <ul class="ng-binding">
          <!--ANCHOR: [ng-repeat]=task in tasks | filter: {'title': searchText} | orderBy: 'when'-->
          <li ng-repeat="task in tasks | filter: {'title': searchText} | orderBy: 'when'" class="ng-binding">...</li>
          <li ng-repeat="task in tasks | filter: {'title': searchText} | orderBy: 'when'" class="ng-binding">...</li>
          <li ng-repeat="task in tasks | filter: {'title': searchText} | orderBy: 'when'" class="ng-binding">...</li>
          </ul>
          <!--ANCHOR: [ng-if]=tasks.length == 0-->
        </todo-list>
        <script type="application/dart" src="main.dart"></script>
        <script src="packages/browser/dart.js"></script>
      </body>
```

localhost:8080/index.html x

localhost:8080/index.html

angular:

## Angular Dart



```

<-body>
  <-cp>
    "angular: "
    <input type="number" ng-model="elementsCount" class="ng-binding ng-dirty ng-touched">
  </cp>
  <shelf books-count="elementsCount" class="ng-binding">
  <shadow-root>
    <style>...</style>
    <style>...</style>
    <h2 class="ng-binding">Angular Dart</h2>
    <div class="ng-binding">
      <!--ANCHOR: [ng-repeat]=book in booksCount|intToList-->
      <angular-book ng-repeat="book in booksCount|intToList" cover-image="dune-cover-old.jpg"
        base-color="#000" class="ng-binding">
        <div class="front ng-binding" style="background-image: url(/dune-cover-old.jpg)"
          angular-book></div>
        <div class="left ng-binding" style="background-color: #000" angular-book></div>
        <div class="right" angular-book></div>
        <div class="back ng-binding" style="background-color: #000" angular-book></div>
        <div class="top" angular-book></div>
        <div class="bottom" angular-book></div>
      </angular-book>
      <angular-book ng-repeat="book in booksCount|intToList" cover-image="dune-cover-new.jpg"
        base-color="#da944c" class="ng-binding">...</angular-book>
    </div>
  </shadow-root>
</shelf>
</cp>
</body>

```

html.ng-binding

Styles Event Listeners DOM Breakpoints Properties

## Chapter 7

The screenshot shows a web browser window with three tabs, all displaying 'index.html' at 'localhost:8080'. The page content includes a form with 'Name: Martin', a list of messages: 'Martin: Hello!', 'Old peculiar: World!', 'Dartisan: It works!', and 'Martin: Yes, it does.', and a 'Message:' input field with a 'Send' button. The developer tools 'Network' tab is open, showing a list of requests. The selected request is from '127.0.0.1' with a 'Data' payload of '{"name": "Martin", "text": "Hello!"}'. Below it, a series of 'change\_name' events are shown, such as '{"type": "change\_name", "name": "Martin"}' and '{"type": "change\_name", "name": "Marti"}'.

Name	Headers	Frames	Length	Time
index.html			40	2:24:59 AM
styles.css			38	2:24:59 AM
main.dart			38	2:24:51 AM
dart.js			39	2:24:29 AM
127.0.0.1			33	2:24:25 AM
			31	2:24:25 AM
			38	2:23:33 AM
			37	2:23:32 AM
			36	2:23:32 AM
			35	2:23:32 AM
			34	2:23:32 AM
			33	2:23:32 AM
			33	2:23:32 AM
			15	2:23:13 AM

The screenshot shows a MySQL database interface for 'dart\_chat' on '127.0.0.1'. The 'chat\_log' table is selected, and its contents are displayed in a table view. The table has columns 'id', 'name', 'text', and 'created'. Three rows of data are shown.

id	name	text	created
1	Martin	Hello, MySQL!	2015-03-04 05:37:11
2	Old Peculiar	It works!	2015-03-04 05:37:54
3	Dartisan	I restarted the server and it still works!	2015-03-04 05:53:10

- bin
  - server.dart
- public
  - subdir
    - chromium.png
    - random-file.txt
    - dart-logo.png
    - styles.css





```
test — bash — 95x22
martin:test martin$ dart test_is_prime.dart
unittest-suite-wait-for-done
PASS: 3 is a prime

FAIL: 2 is a prime
  Expected: true
  Actual: <false>

package:unittest/src/simple_configuration.dart 15:28  _ExpectFailureHandler.fail
package:matcher/src/expect.dart 121:9               DefaultFailureHandler.failMatch
package:matcher/src/expect.dart 95:29               expect
test_is_prime.dart 19:11                             defineTests.<fn>
dart:isolate                                         _RawReceivePortImpl._handleMessage

1 PASSED, 1 FAILED, 0 ERRORS
martin:test martin$ echo $?
1
martin:test martin$
```

```
test — bash — 95x22
martin:test martin$ dart test_is_prime.dart
unittest-suite-wait-for-done
PASS: 3 is a prime

ERROR: 2 is a prime
  Test failed: Caught Class 'String' has no instance method '<='.

NoSuchMethodError: method not found: '<='
Receiver: "foo"
Arguments: [2]
dart:core                                         Object.noSuchMethod
package:Chapter_08_unittest/methods.dart 7:11  isPrime
test_is_prime.dart 19:19                         defineTests.<fn>
dart:isolate                                         _RawReceivePortImpl._handleMessage

1 PASSED, 0 FAILED, 1 ERRORS
martin:test martin$ echo $?
1
martin:test martin$
```

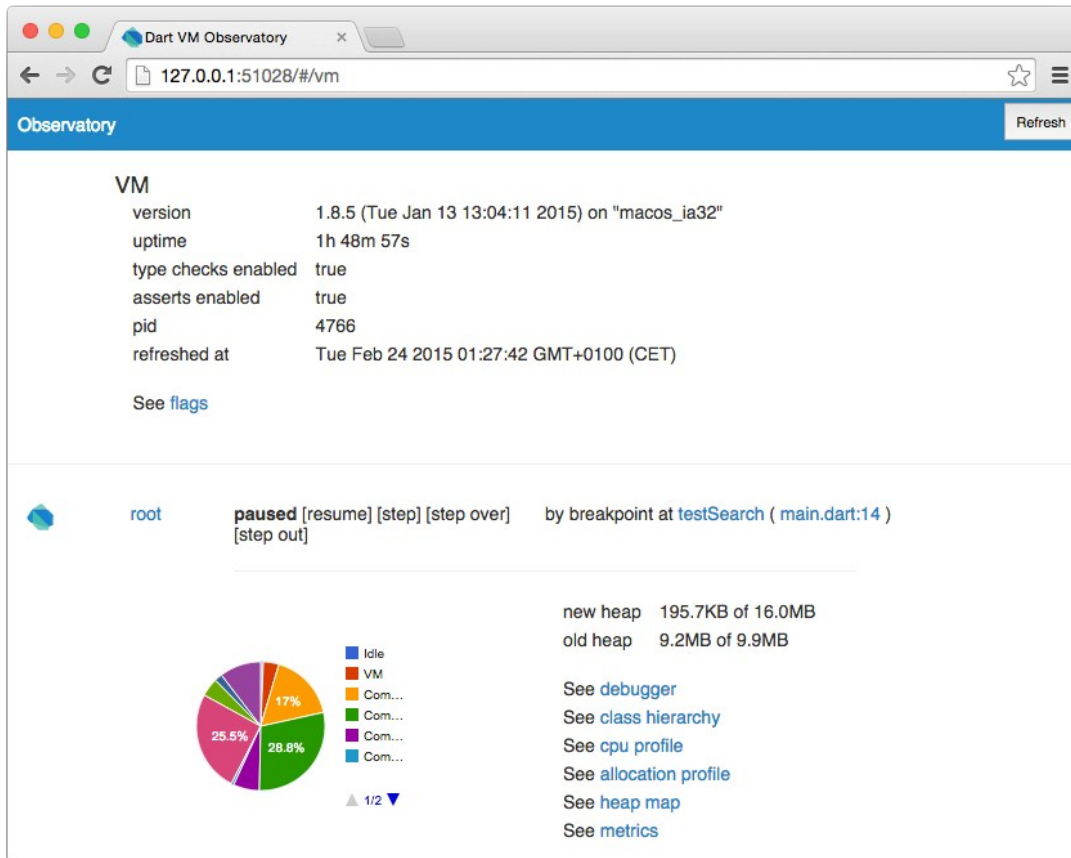
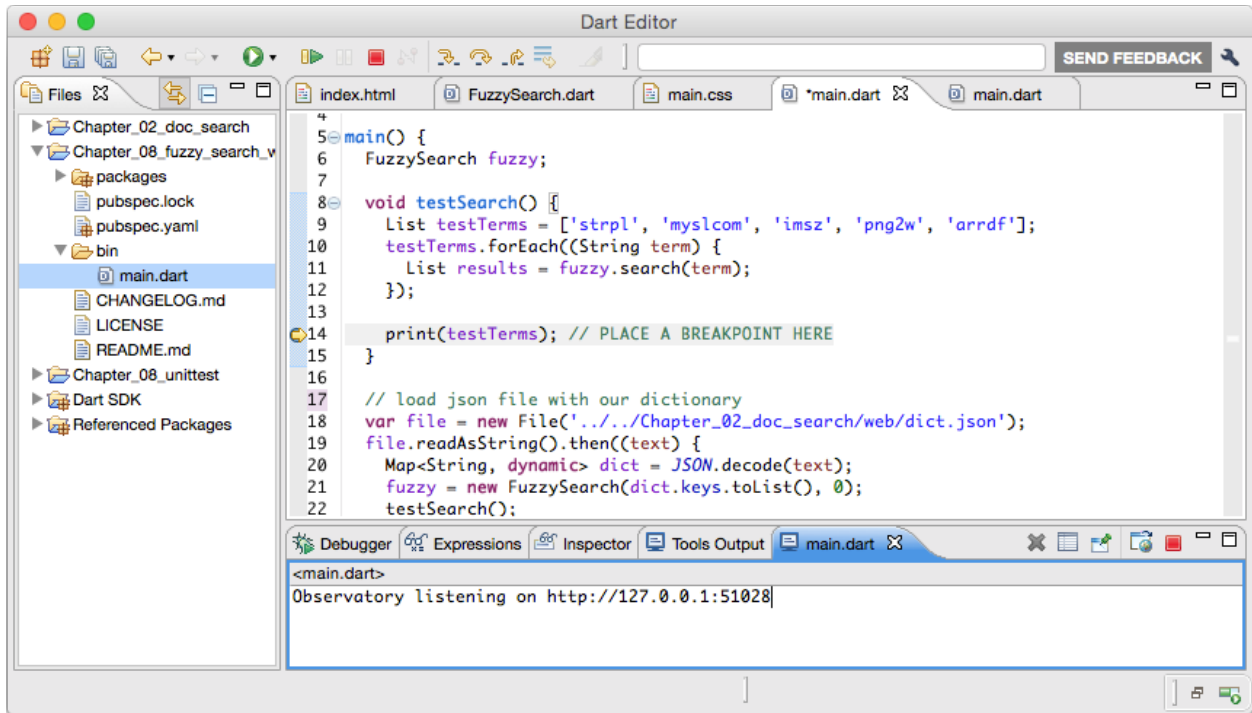
```
test — bash — 75x14
martin:test martin$ dart test_is_prime.dart
unittest-suite-wait-for-done
PASS: 3 is a prime

PASS: 2 is a prime

All 2 tests passed.
unittest-suite-success
martin:test martin$ echo $?
0
martin:test martin$
```

```
bin — bash — 75x12
martin:bin martin$ time dart unique_and_prime.dart --silent -m 1000000
987631

real    0m0.325s
user    0m0.310s
sys     0m0.017s
martin:bin martin$
```



Dart VM Observatory Martin

127.0.0.1:51028/#/inspect?isolateId=isolates%2F636144564&o... ☆ php lb ☰

Observatory > root > fuzzy > fuzzy\_search.dart Refresh Refresh Coverage

```
B 15 // Iterate entire list.
B 16 List<String> result = list.where((String key) {
B 17     int ti = 0; // term index
B 18     // int si = 0; // key index
B 19     // Check order of characters in the search term and in the string.
B 20     for (int si = 0; si < key.length; si++) {
B 21         if (term[ti] == key[si]) {
B 22             ti++;
B 23             if (ti == term.length) {
B 24                 return true;
B 25             }
B 26         }
B 27     }
B 28     return false;
B 29 }).toList(growable: false);
B 30
B 31 // Custom sort function.
B 32 // We want the shortest terms to be first because it's more likely
B 33 // that what you're looking for is there.
B 34 result.sort((String a, String b) {
B 35     if (a.length > b.length) {
B 36         return 1;
B 37     } else if (a.length == b.length) {
B 38         return 0;
B 39     }
```