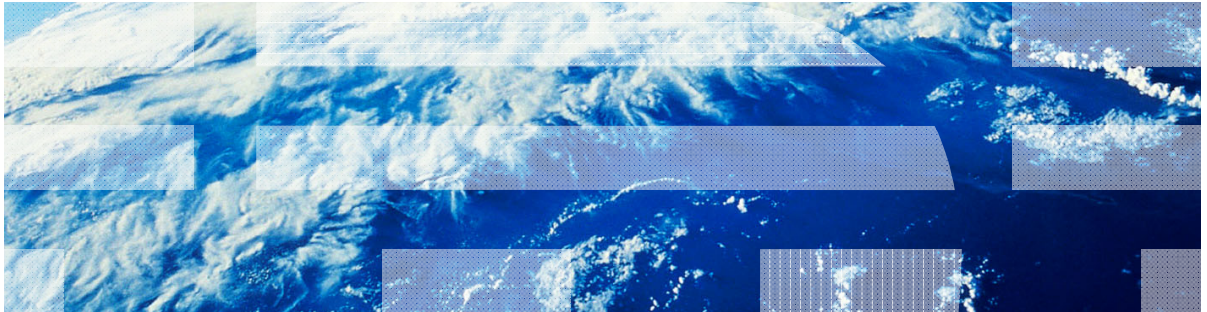


# ***IBM Worklight V5.0.5***

## ***Getting Started***

### **Module 7.2 – Code Optimization for Specific Environments**



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## Agenda

- What is an environment optimization?
- Currently supported environments
- How does optimization work?

## ***What is an environment optimization?***

- IBM Worklight® applications run in multiple mobile, tablet and web environments.
- Runtime environments differ from each other in many aspects such as screen size, orientation, specific UI guidelines and components, physical user interface, and unique environment functionality.
- IBM Worklight increases development efficiency and productivity by providing an environment optimization framework.
- The core logic and design guidelines of the app are written by using web technologies (HTML, CSS and JavaScript) and are shared by all environments.
- Environment-specific optimization can be added when required.
- If you use a source control management system (such as Rational Team Concert™ (RTC), GIT or Subversion), see *Integrating with source control systems* in the IBM Worklight Information Center for instructions on how to commit your source code to such systems.

## Agenda

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# Currently Supported Environments



- iOS 4 and later
- Android 2.1 and later
- BlackBerry OS 5 and later
- Windows Phone 7 and later



- Modern browsers supporting HTML4, CSS2.1 and JavaScript 1.5 at a minimum
- Browsers supporting HTML5 and CSS3



- iOS 4.x and later
- Android 2.1 and later



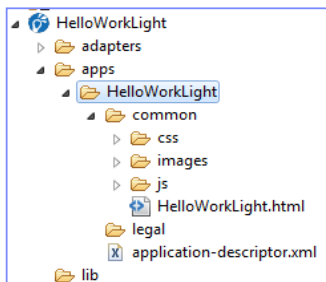
- Win Gadgets: XP, Vista and 7, Mac Widgets: OSX 10
- Facebook apps and iGoogle gadgets
- Embedded as an iframe in web pages
- Browsers: IE 7 and later, latest Chrome, Firefox and Safari

## Agenda

- What is environment optimization?
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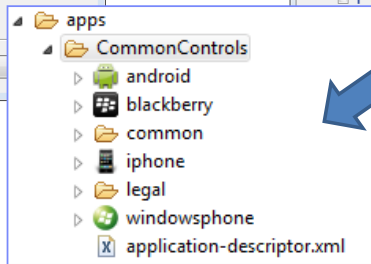
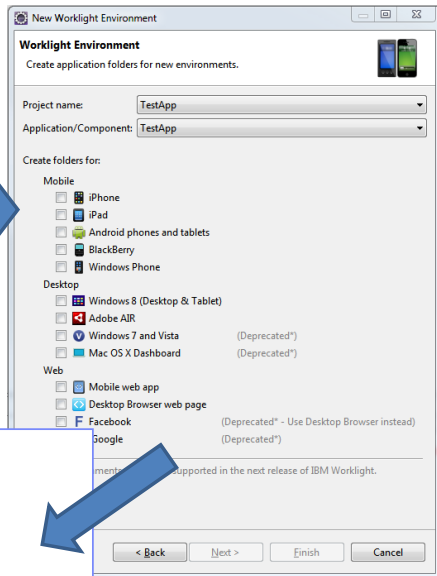
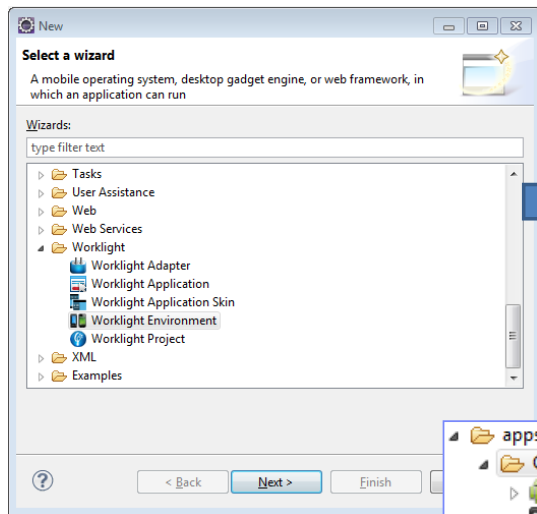
## How does optimization work?

- The Worklight application structure is divided into environment folders (iPhone, Android, BlackBerry, and so on).
- Each environment folder contains the resources (CSS, JS, images, and so on) that are relevant for that specific environment.
- A newly created application contains the base environment in a common folder. The common resources serve as the basis for the optimized environments that might be added later.
- The common folder should only hold resources that are shared by all environments.





# Adding a new environment



## How does optimization work?

### HTML

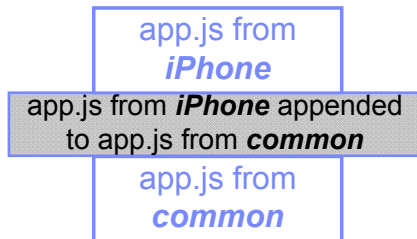
- The newly added environment (for example, iPhone) extends the resources of the common environment in the following way:
  - HTML: The common HTML file is overridden by the new environment HTML code
  - Note that by default a new environment does not include a new HTML file because the common HTML is shared by all environments



# How does optimization work?

## JavaScript

- The newly added environment (for example, iPhone) extends the resources of the common environment in the following way:
  - JavaScript: The JavaScript file from an environment folder has a `wlEnvInit()` function that invokes the `wlCommonInit()` JavaScript function from the common folder
  - Technically, the JavaScript from an environment folder is appended to the file from common
  - Using the same variable names as in common redefines their meaning



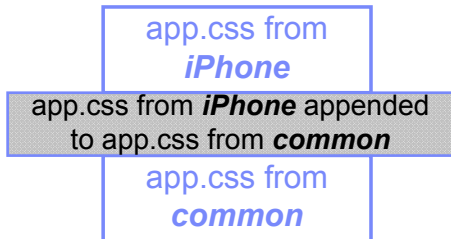
```
function wlEnvInit(){  
    wlCommonInit();  
}
```

```
function wlCommonInit() {  
    // Put your initialization code here  
}
```

## How does optimization work?

### CSS

- The newly added environment (for example, iPhone) extends the resources of the common environment in the following way:
  - CSS: The CSS file from an environment folder is appended to the CSS file from the common folder
  - Using the same property names as in common overrides their settings
  - Note that the environment CSS might contain some default CSS rules that match the environment needs



```
/*
NOTE: THIS CSS FILE EXTENDS THE BASE APP CSS FILE (UNDER COMMON)
*/

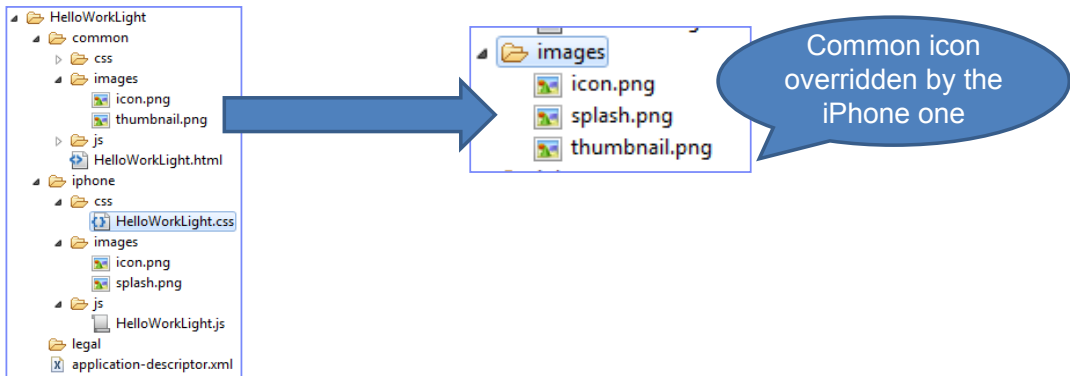
/*BODY SHOULD STRETCH IN AN IPHONE APPLICATION*/
body {
    height: auto;
    overflow: auto;
}

/*WORKLIGHT CONTAINER DIV*/
#content {
    height: auto;
    width: 100%;
    border: none;
}
```

# How does optimization work?

## Images

- The newly added environment (for example, iPhone) extends the resources of the common environment in the following way:
  - Images: A new environment images folder contains the required default images for the specific environment
  - Note that the new environment images override the common images if name collision occurs



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