

Università degli Studi di Napoli "PARTHENOPE"  
Dipartimento di Scienze e Tecnologie  
Corso di Laurea Magistrale in Informatica Applicata  
**Architettura e Programmazione di Reti Avanzate**



## **PebbleJS on Browser**

Prof. R. Montella

Alessandro Longobardi 0120/119  
Marco Saviano 0120/114

# Contents

1. Introduction
2. Pebble.js
3. Cloud Pebble
4. Pebble Emulator
5. PebbleJS on Browser
6. Conclusion and Future Works
7. References & Contacts

# 1- Introduction

- The aim of our work is to use Pebble.js Javascript framework to create apps running on browser for every type of devices (desktop, tablet, smartphone etc...)
- Tools used:
  - ✓ *Pebble.js*
  - ✓ *CloudPebble*
  - ✓ *PebbleEmulator*
  - ✓ *JQWidgets*

## 2-Pebble.js

- It is a Javascript Framework that allows writing Pebble applications in JavaScript
- Pebble.js follows modern JavaScript best practices

# 2-Pebble.js

## Get Started - Card

```
var UI = require('ui');  
  
var main = new UI.Card({  
  title: 'Pebble.js',  
  subtitle: 'Hello World!',  
  body: 'Press any button.'  
});  
  
main.show();
```



# 2-Pebble.js

## Get Started - Menu

```
main.on('click', 'up', function(e) {  
  var menu = new UI.Menu({  
    sections: [{  
      items: [{  
        title: 'Pebble.js',  
        subtitle: 'Can do Menus'  
      }, {  
        title: 'Second Item',  
        subtitle: 'Subtitle Text'  
      }]  
    }]  
  });  
  menu.on('select', function(e) {  
    console.log('Selected item: ' + e.section + ' ' + e.item);  
  });  
  menu.show();  
});
```



# 2-Pebble.js

## Get Started – Button Bind

```
main.on('click', 'down', function(e) {  
  var card = new UI.Card();  
  card.title('A Card');  
  card.subtitle('Is a Window');  
  card.body('The simplest window type in Pebble.js.');
```



# 3-CloudPebble

- It is a web-based IDE for Pebble development
- Created by Katharine Berry
- It provides several useful features for new Pebble developers, including online compilation, Github integration, and a GUI-based app configuration panel
- Using CloudPebble means that users are not required to download, install, and configure the Pebble SDK on their local computer



## 4-Pebble Emulator

- Developers can create apps using Pebble.js and watch how they work on browser using ***CloudPebble on Steroids*** and ***Pebble Emulator***

***For more details:***

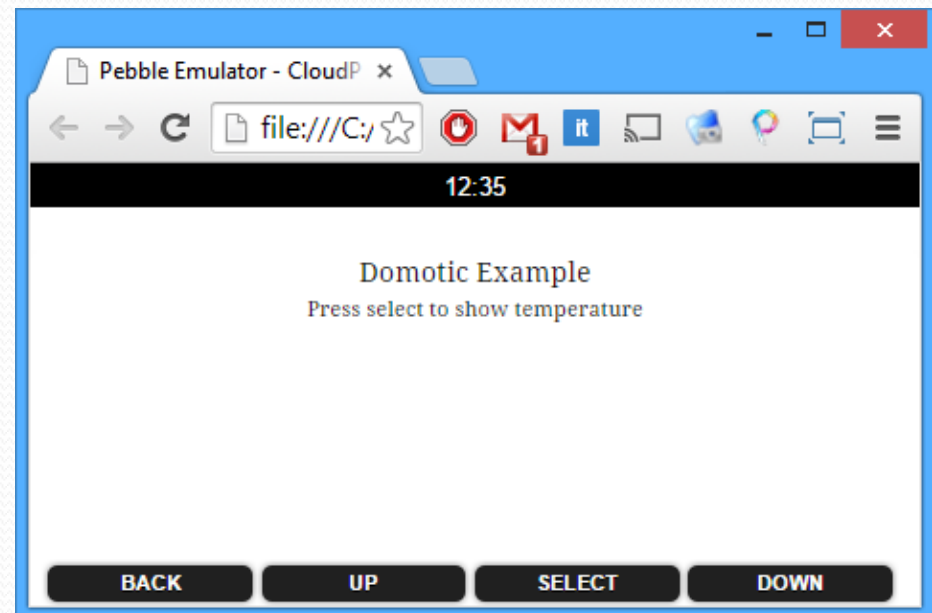
***<https://students.uniparthenope.it/~0124000391/pebble/>***

# 5-PebbleJS on Browser

## Run on Browser

- In our Framework, Pebble.js apps run on browser

```
var UI = require('ui');  
var Vector2 = require('vector2');  
  
var main = new UI.Card({  
  title: 'Domotic Example',  
  body: 'Press select to show temperature',  
  scrollable: true,  
});  
  
main.show();
```



# 5-PebbleJS on Browser

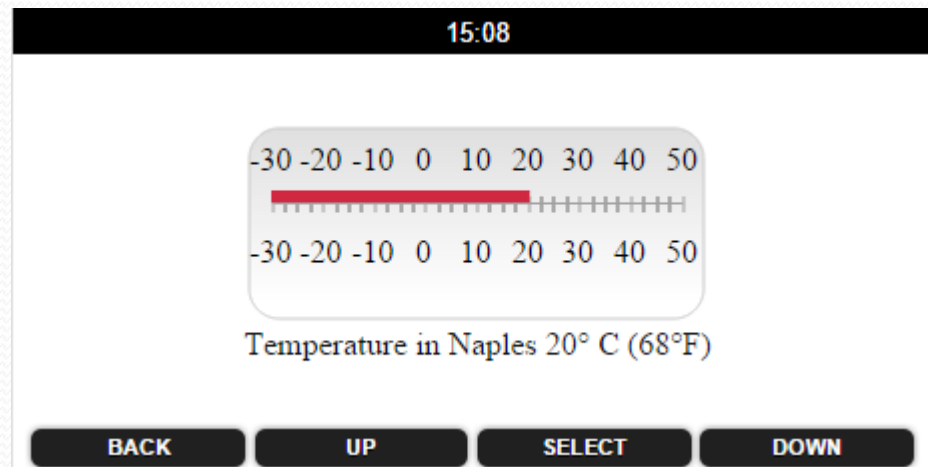
## Custom Card - WTemp

- We add a new UI object in Pebble.js, **WTemp** (**Widget Temperature**), a Card that shows temperature of a city passed as parameter
- HTTP connections are very easy with the included *ajax* library in JavaScript

# 5-PebbleJS on Browser

## Custom Card - WTemp

```
main.on('click', 'select', function(e) {  
  var temp=new UI.WTemp({  
    city: 'Napoli' //If u want to use Yahoo API to get temperature, set param city  
  });  
  temp.show();  
});
```



# 5-PebbleJS on Browser

## WTemp

```
function WTemp(params) {
  Window.call(this, params); // call super constructor
  var wTemp = this.element;
  if (params.style) {
    wTemp.addClass(param.style);
  }
  //Creazione elementi html contenente il nuovo div e lo script per la creazione del widget
  var row = $(document.createElement('div')).addClass('row').attr('style', "margin-left:25%;margin-top:2.5%");
  var title = $(document.createElement('div')).attr('id', "gauge");
  var textScr = " $(document).ready(function () {var majorTicks = { size: '5%', interval: 10 },\
    minorTicks = { size: '5%', interval: 2.5, style: { 'stroke-width': '1%', stroke: '#aaaaaa' } },\
    labels = { interval: 10 };\\
    $('#gauge').jqxLinearGauge({\\
      width: '50%',\\
      height: 100,\\
      orientation: 'horizontal',\\
      labels: labels,\\
      ticksMajor: majorTicks,\\
      ticksMinor: minorTicks,\\
      max: 50,\\
      min: -30,\\
      value: -30,\\
      pointer: { size: '6%' },\\
      colorScheme: 'scheme04',\\
      \\
    });"
}
```

# 5-PebbleJS on Browser

## WTemp

```
/*
*****
set in tempC e tempF value of temperature
*****
//Chiamata GET ad API weather Yahoo per ottenere la temperatura della città passata come parametro a wTemp
$.ajax({
  url: 'https://query.yahooapis.com/v1/public/yql?q=select%20*%20from%20weather.forecast%20where%20woeid%20in%20(select%20woeid%20from%20geo.places(1)%20where%20text%3D%22' + params.city + '%22)&format=json&\
  env=store%3A%2F%2Fdatatables.org%2Falltableswithkeys',
  type: 'GET',
  dataType: 'JSON',
  success: function(data) {

    tempF = data.query.results.channel.item.condition.temp;
    tempC = (tempF - 32) * 5 / 9;

    var textScript = textScr.concat("$('#gauge').jqxLinearGauge('value', " + tempC + ");    });");
    var script = $(document.createElement("script")).text(textScript);
    title.append(script);
    row.append(title);
    wTemp.append(row);
    var cityName=data.query.results.channel.location.city;
    var text = $(document.createElement('div')).text("Temperature in " + cityName + " " + Math.ceil(tempC) + "°\
    C (" + tempF + "°F)").attr('id', "textID").attr('style', "text-align:center;margin-top:3px");
    wTemp.append(text);
  },
  error: function() {
    alert("Error getting temperature from Yahoo API");
  }
});
```

## 6 – Conclusion and Future Works

- Create apps with simple UI
  - Simplicity of Pebble.js
  - Perfect for different sizes of screen (tablet, smartphone, desktop)
  - Internet of things apps (domotic, nautic etc..)
- 
- Add other UI Objects
  - Create custom layout for specific applications

# References & Contacts

- <https://web.uniparthenope.it/>
  - <http://pebble.github.io/pebblejs/>
  - <https://students.uniparthenope.it/~0124000391/pebble/>
  - <http://www.jqwidgets.com/>
  - <https://developer.yahoo.com/weather/>
- 
- Marco Saviano – [marco.saviano.89@gmail.com](mailto:marco.saviano.89@gmail.com)
  - Alessandro Longobardi – [alessandrolongobardi89@gmail.com](mailto:alessandrolongobardi89@gmail.com)





The End

*Thank you for the attention*

*Marco Saviano*

*Alessandro Longobardi*