USING THE WinRT API TO BUILD A TOUCH FIRST ENTERPRISE APP

WINJS
NAMESPACES
CHARMS

THE PROJECT

A radically simplified **all of enterprise app**, based on the solid [as in 12 years old] mydigitalstructure webapi & platform and associated *model*.

CONTACTS

ACTIONS

PROJECTS

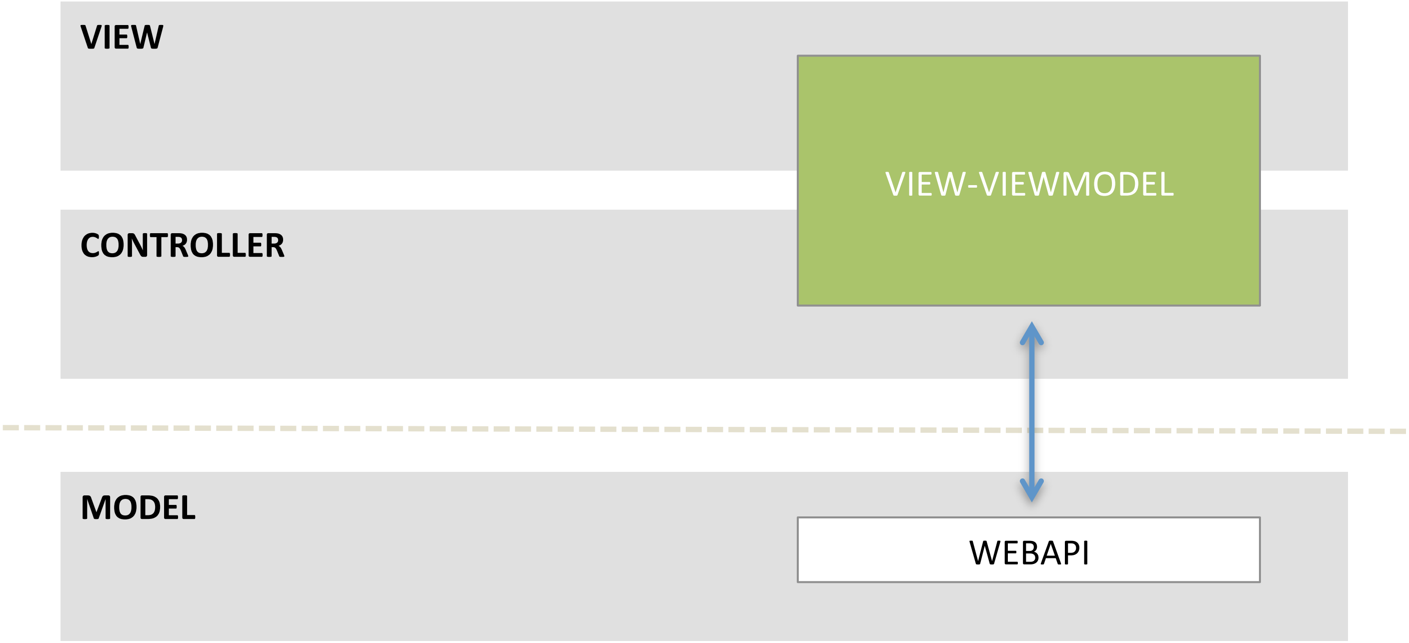
MESSAGING

ORDERS

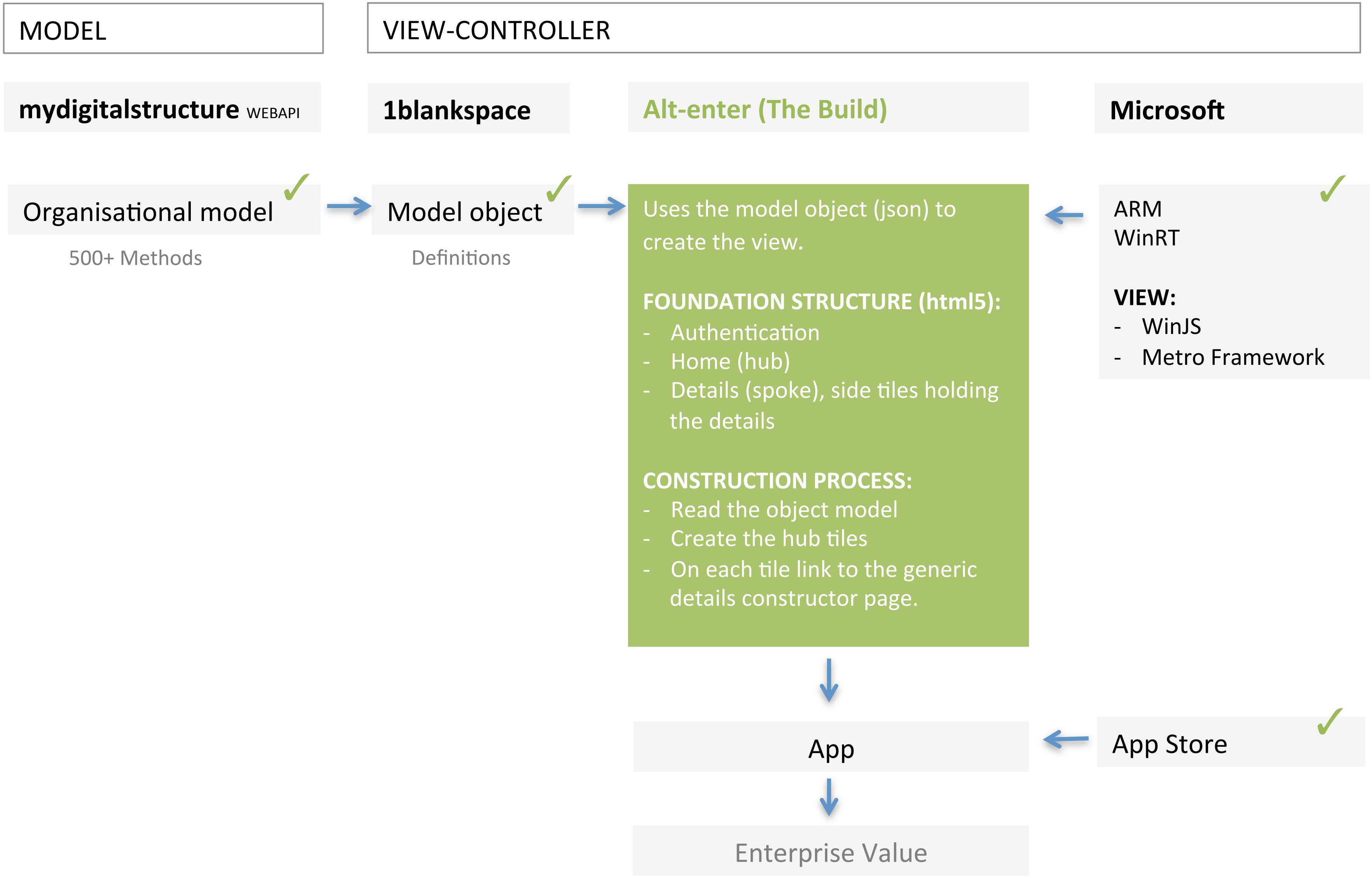
FINANCIALS

THE ARCHITECTURE

Resource oriented architecture & Model-View-Controller (MVC)



BREAKING IT DOWN & LEVERAGING



MODEL

VIEW-CONTROLLER

mydigitalstructure WEBAPI

1blankspace

Alt-enter (The Build)

Microsoft

Organisational model ✓

500+ Methods

Model object ✓

Definitions

Uses the model object (json) to create the view.

FOUNDATION STRUCTURE (html5):

- Authentication
- Home (hub)
- Details (spoke), side tiles holding the details

CONSTRUCTION PROCESS:

- Read the object model
- Create the hub tiles
- On each tile link to the generic details constructor page.

ARM
WinRT ✓

VIEW:

- WinJS
- Metro Framework

App

App Store ✓

Enterprise Value

BREAKING IT DOWN – THE BUILD

Uses the model object (json) to create the view.

FOUNDATION STRUCTURE (html5):

-Authentication

-Home (hub)

-Details (spoke) – interacting with the data.

CONSTRUCTION PROCESS:

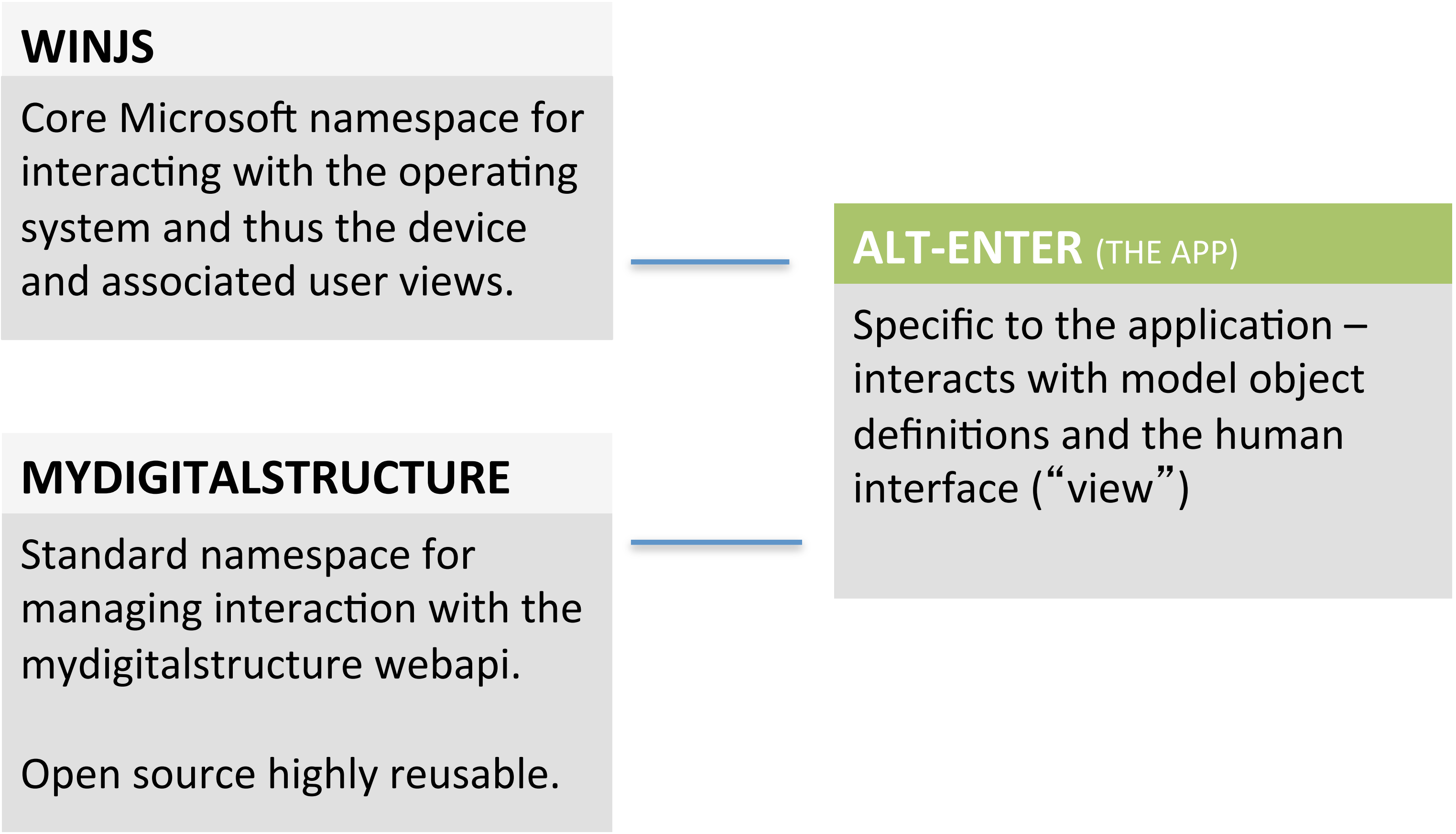
-Read the object model

-Create the hub tiles

-On each tile link to the generic details constructor page.

REFACTORING & NAMESPACES

Using WinJS.Namespace



WINJS

Core Microsoft namespace for interacting with the operating system and thus the device and associated user views.

MYDIGITALSTRUCTURE

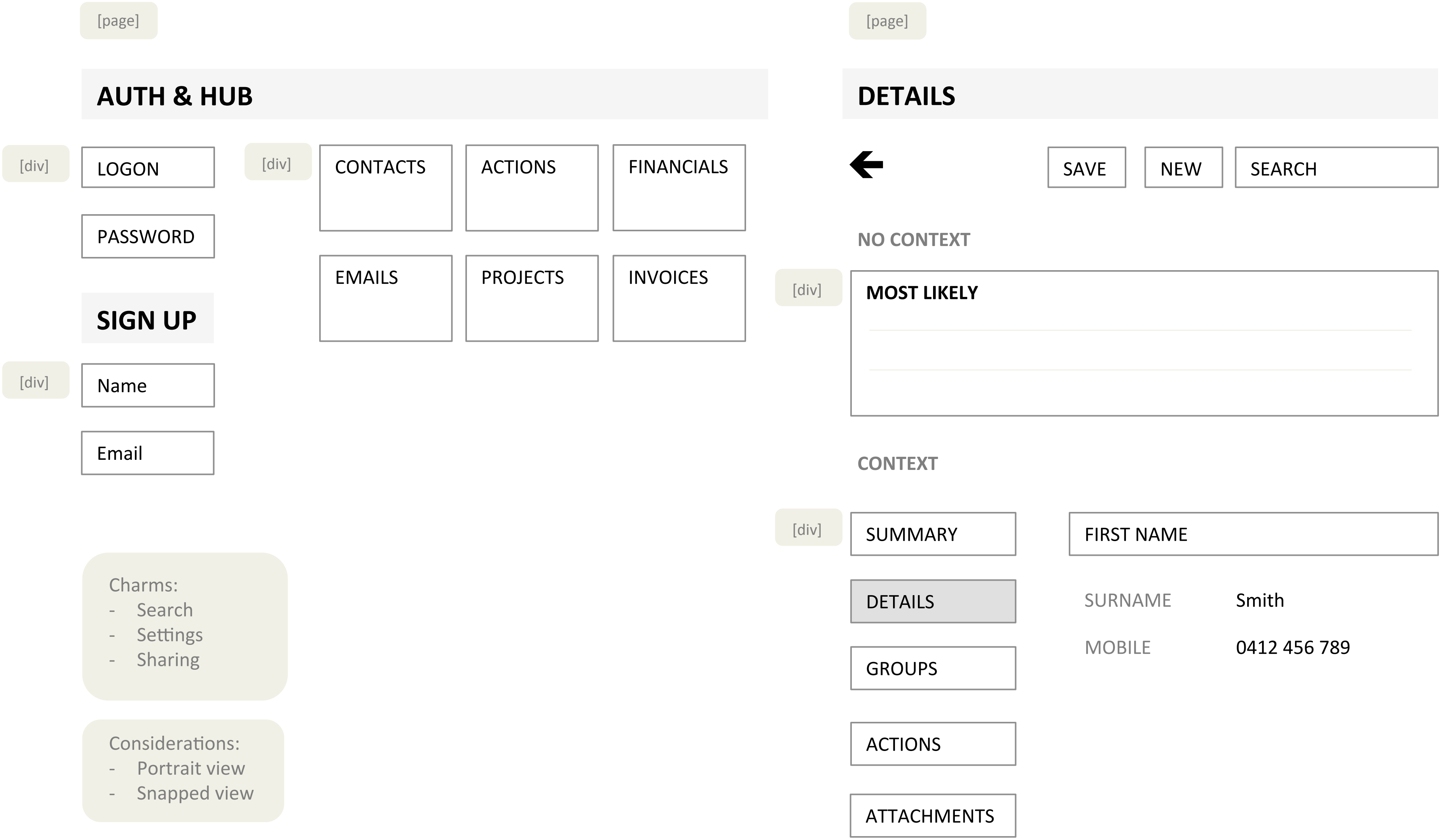
Standard namespace for managing interaction with the mydigitalstructure webapi.

Open source highly reusable.

ALT-ENTER (THE APP)

Specific to the application – interacts with model object definitions and the human interface ("view")

VIEW STRUCTURE – HTML5



[page]

AUTH & HUB

[div]

LOGON

PASSWORD

[div]

CONTACTS

ACTIONS

FINANCIALS

EMAILS

PROJECTS

INVOICES

SIGN UP

[div]

Name

Email

Charms:
- Search
- Settings
- Sharing

Considerations:
- Portrait view
- Snapped view

[page]

DETAILS

←

SAVE

NEW

SEARCH

NO CONTEXT

[div]

MOST LIKELY

CONTEXT

[div]

SUMMARY

DETAILS

GROUPS

ACTIONS

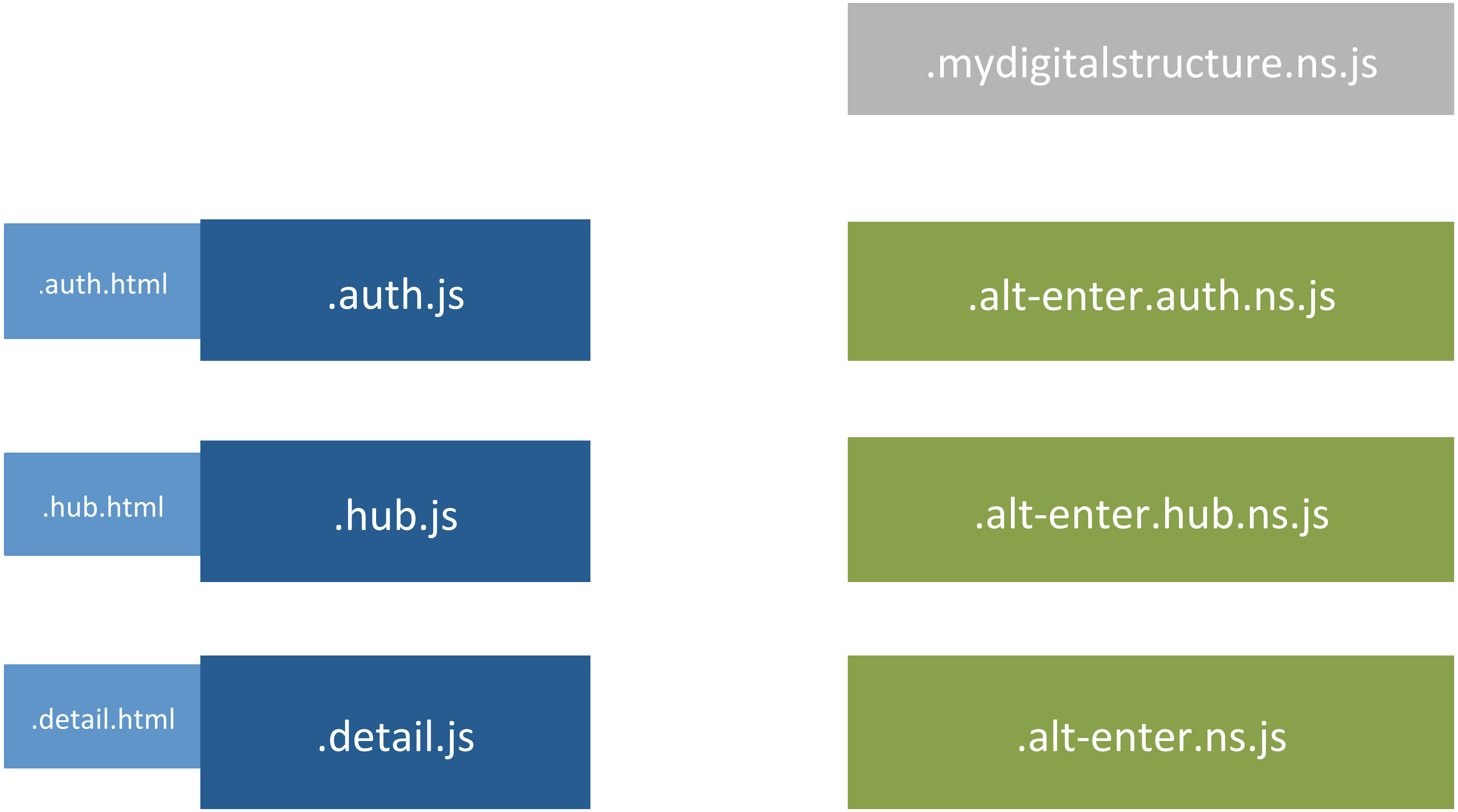
ATTACHMENTS

FIRST NAME

SURNAME	Smith
MOBILE	0412 456 789

VIEW

MODEL



.auth.html

.auth.js

.hub.html

.hub.js

.detail.html

.detail.js

.mydigitalstructure.ns.js

.alt-enter.auth.ns.js

.alt-enter.hub.ns.js

.alt-enter.ns.js

BUILDING TOOLS & ASSETS

TEMPLATES

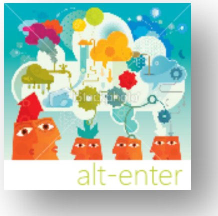
VISUAL STUDIO EXPRESS 2012 RC FOR WINDOWS 8

Templates > Javascript > Grid App, Split App

SDK METRO APP SAMPLES

- XHR, handling navigation errors and URL schemes sample
- HTML*

TILES



CODING - JQUERY TO WINJS

	JQUERY	**WINJS**
COMMON	css, Javascript	
WIDGETS	jQueryUI	WinJS
AJAX	$.ajax()	WinJS.**xhr**()
HTML5 ELEMENT SELECTION	$.()	WinJS.**querySelector**()
DATA ITERATING	$.each()	WinJS.**forEach**(value, index)
EVENTS	$*.click()*	WinJS.**addEventListener**()
VISIBILITY	$*.hide()*	WinJS.**UI.fadeIn**() / .**fadeOut**()

CODING – WIN JS TIPS

- App Start (main):
  `(function() {})`

- Document Ready:
  `ui.Pages.define(uri, {ready: `*`[document ready function]`*` };`

- Metro styling compliments of
  `ui-light.css / ui-dark.css. Tiles, headers, buttons and more`

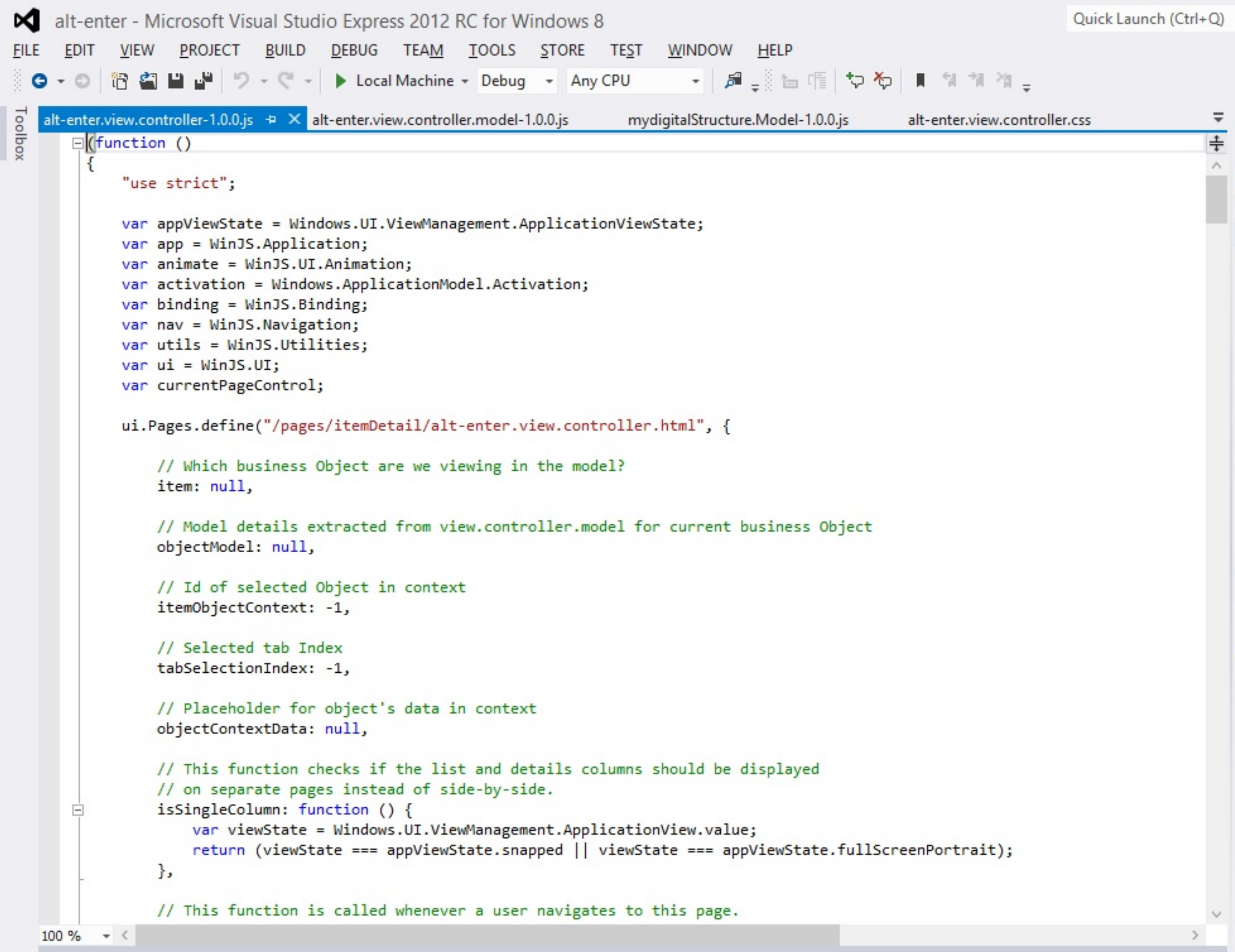
- Async waiting image: Use css class:
  `win-ring & progressRingText.`

- Reference eBook
  `http://mydigitalstructure.com/metro`

- Use DOM Explorer

- dev.windows.com
  Quickstart documents provide examples (in the *See also* area)

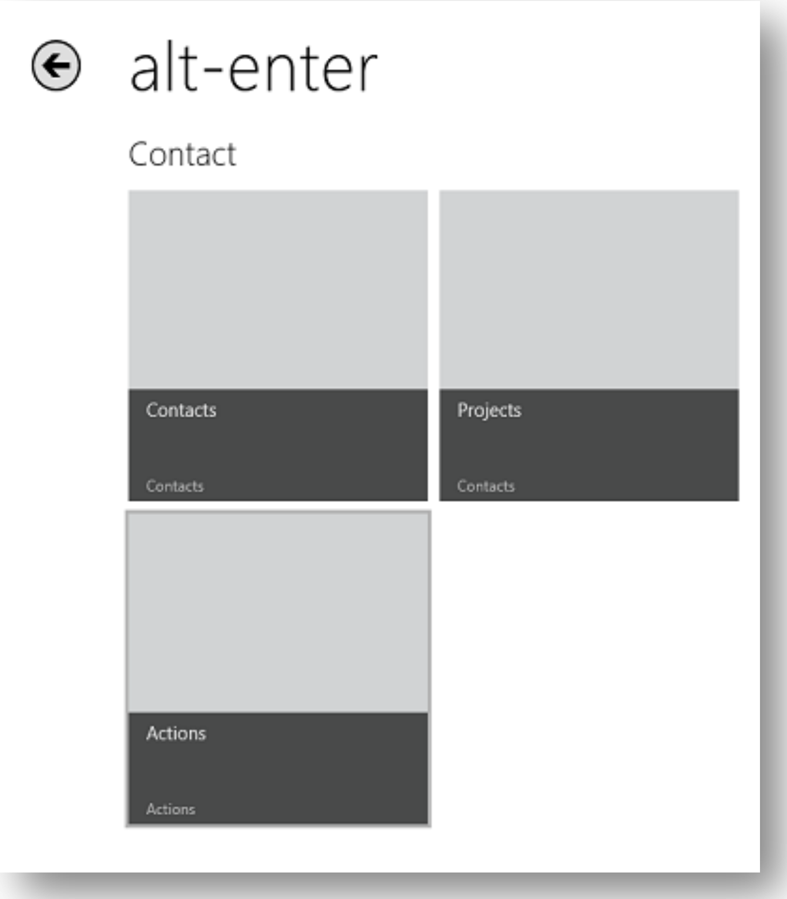
CODING - VISUAL STUDIO 2012 EXPRESS RC


alt-enter - Microsoft Visual Studio Express 2012 RC for Windows 8
Quick Launch (Ctrl+Q)
FILE
EDIT
VIEW
PROJECT
BUILD
DEBUG
TEAM
TOOLS
STORE
TEST
WINDOW
HELP
Local Machine
Debug
Any CPU
Toolbox
alt-enter.view.controller-1.0.0.js
alt-enter.view.controller.model-1.0.0.js
mydigitalStructure.Model-1.0.0.js
alt-enter.view.controller.css
100 %

```
(function ()
{
    "use strict";

    var appViewState = Windows.UI.ViewManagement.ApplicationViewState;
    var app = WinJS.Application;
    var animate = WinJS.UI.Animation;
    var activation = Windows.ApplicationModel.Activation;
    var binding = WinJS.Binding;
    var nav = WinJS.Navigation;
    var utils = WinJS.Utilities;
    var ui = WinJS.UI;
    var currentPageControl;

    ui.Pages.define("/pages/itemDetail/alt-enter.view.controller.html", {

        // Which business Object are we viewing in the model?
        item: null,

        // Model details extracted from view.controller.model for current business Object
        objectModel: null,

        // Id of selected Object in context
        itemObjectContext: -1,

        // Selected tab Index
        tabSelectionIndex: -1,

        // Placeholder for object's data in context
        objectContextData: null,

        // This function checks if the list and details columns should be displayed
        // on separate pages instead of side-by-side.
        isSingleColumn: function () {
            var viewState = Windows.UI.ViewManagement.ApplicationView.value;
            return (viewState === appViewState.snapped || viewState === appViewState.fullScreenPortrait);
        },

        // This function is called whenever a user navigates to this page.
```

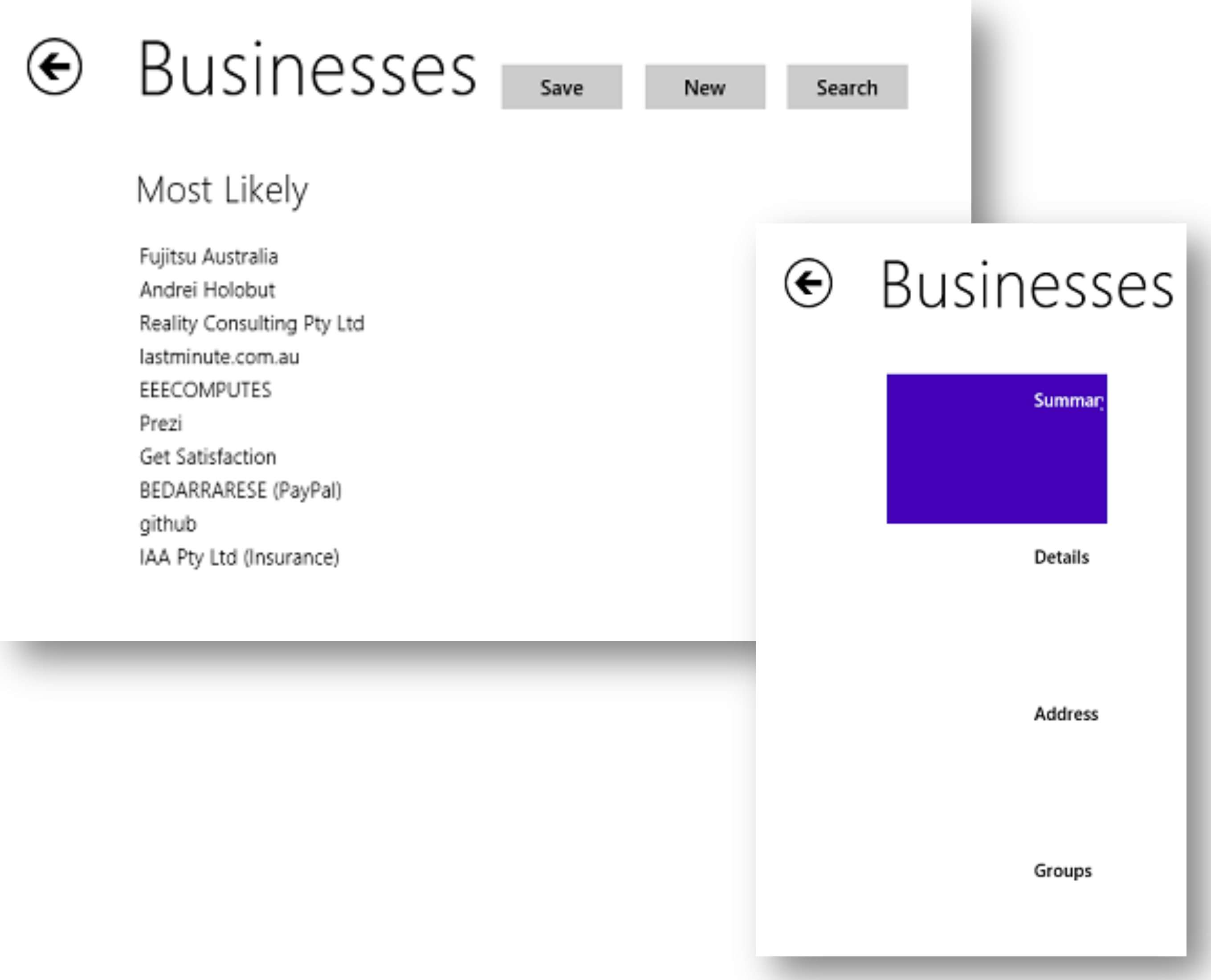
CODING - HUB

groupedItems.html



CODING - DETAILS

alt-enter.view.controller.html



Most Likely

Fujitsu Australia
Andrei Holobut
Reality Consulting Pty Ltd
lastminute.com.au
EEECOMPUTES
Prezi
Get Satisfaction
BEDARRARESE (PayPal)
github
IAA Pty Ltd (Insurance)

NAMESPACES

MYDIGITALSTRUCTURE

.search() (read)
.manage() (create & update)
.remove() (destroy)

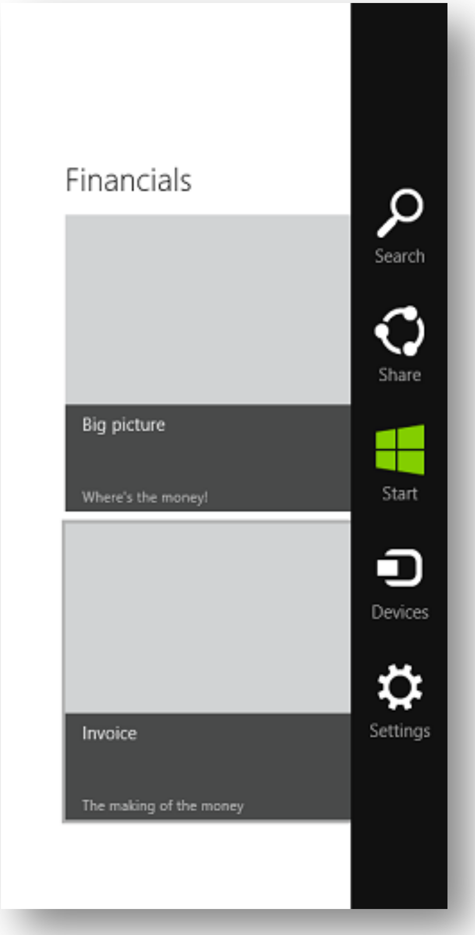
js/mydigitalstructure.ns.js

ALT-ENTER (THE APP)

.currentObject()
.objectContextData()
.objectModelDefinition()
.getViewGroups()
.addViewGroup()
.clearViewGroups()
.setCurrentObjectModel()
.getCurrentObjectModel()
.getObjectModel()
.getObjectVIewModel()
.getObjectViewModelGroups()
.getObjectViewSummary()
.getObjectItem()
.setObjectHome()

js/alt-enter.ns.js

CODING – CHARMS – SETTINGS & SEARCH



SEARCH

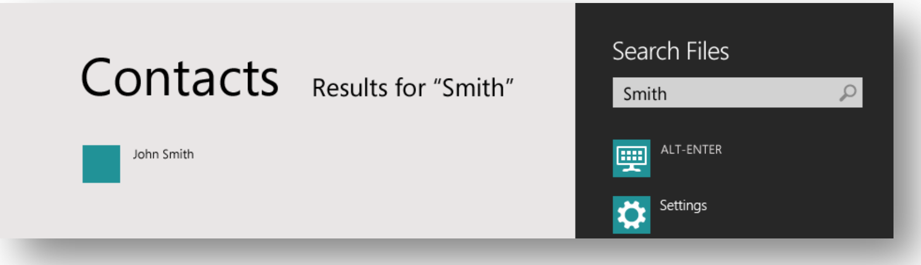
Allows a user to search the contacts with in the app.

The search entry point shows a summary of linked Information.

SETTINGS

Allows the user to change password and update their own app specific details.

CODING – CHARMS
SEARCH



```
WinJS.Application.addEventListener("activated", function (eventObject) {
    ...
    if (eventObject.detail.kind === appModel.Activation.ActivationKind.launch) {
        ...
    } else if (eventObject.detail.kind === appModel.Activation.ActivationKind.search) {
        uri = "/pages/detail/alt-enter.detail.search.html”;
        pageParameters = { queryText: eventObject.detail.queryText};
    }

    if (uri) {
        eventObject.setPromise(ui.processAll().then(function () {
            return nav.navigate(uri, pageParameters);
        }));
    }
});
```

WHEN CONTACT SELECTED:

```
nav.navigate
(
     "/pages/detail/alt-enter.detail.html”,
     { selectedIndex: -1,
       objectContext: <id>,
       item: Model.currentObject
     }
);
```

THANKS

Win 8 ERP – Touch first Business apps

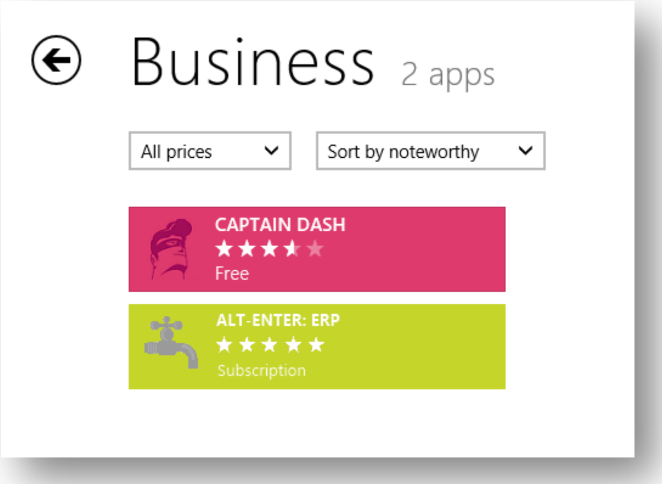
Special offer to DDD! Sydney attendees.

This presentation & other links check out:

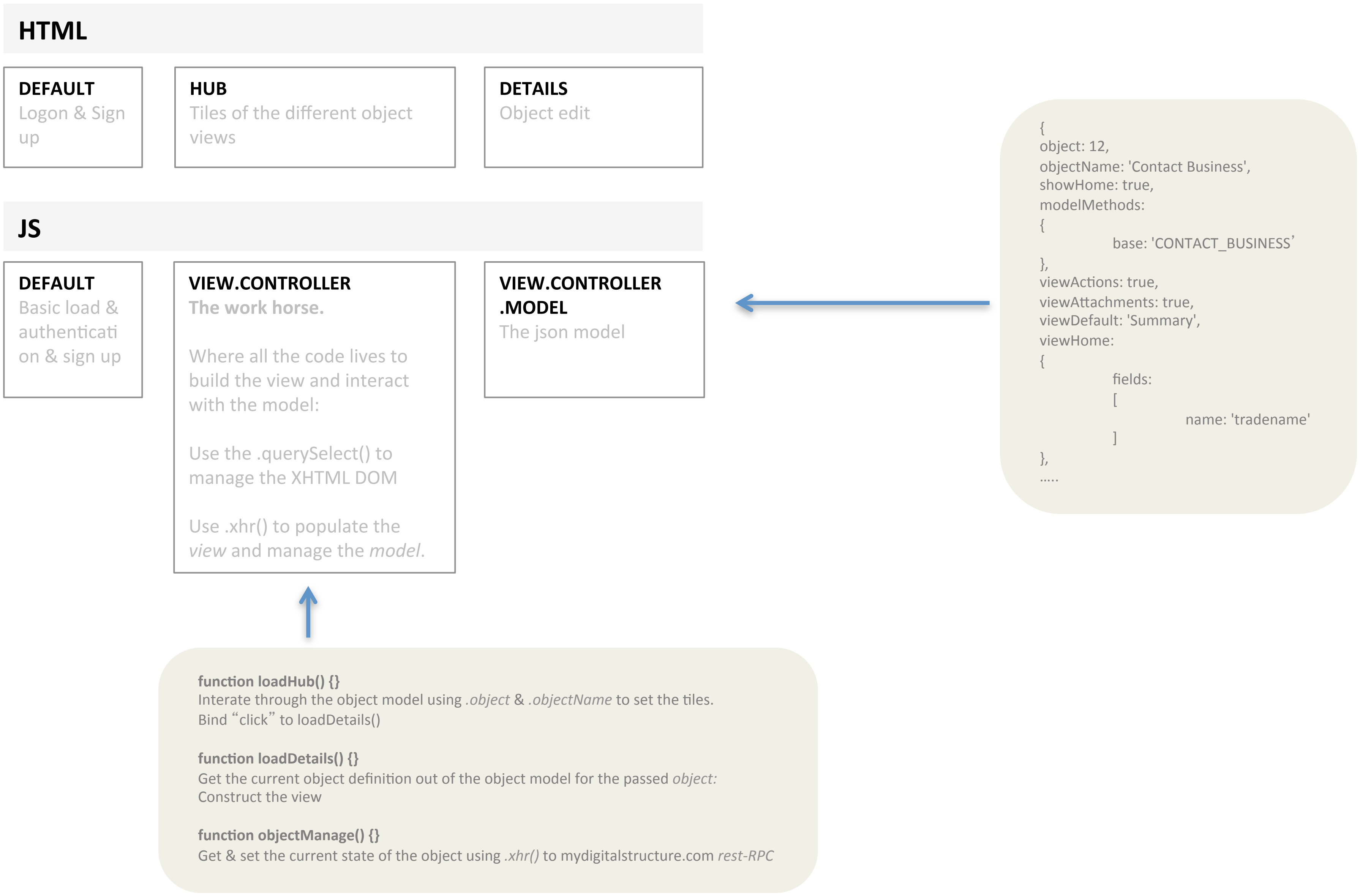
mydigitalstructure.com/metro

PACKAGING FOR APP STORE

APP STORE



Business 2 apps



HTML

DEFAULT
Logon & Sign up

HUB
Tiles of the different object views

DETAILS
Object edit

JS

DEFAULT
Basic load & authenticati on & sign up

VIEW.CONTROLLER
The work horse.

Where all the code lives to build the view and interact with the model:

Use the .querySelect() to manage the XHTML DOM

Use .xhr() to populate the *view* and manage the *model*.

VIEW.CONTROLLER .MODEL
The json model

```
{
object: 12,
objectName: 'Contact Business',
showHome: true,
modelMethods:
{
            base: 'CONTACT_BUSINESS'
},
viewActions: true,
viewAttachments: true,
viewDefault: 'Summary',
viewHome:
{
            fields:
            [
                        name: 'tradename'
            ]
},
.....
```

function loadHub() {}
Interate through the object model using *.object* & *.objectName* to set the tiles.
Bind “click” to loadDetails()

function loadDetails() {}
Get the current object definition out of the object model for the passed *object:*
Construct the view

function objectManage() {}
Get & set the current state of the object using *.xhr()* to mydigitalstructure.com *rest-RPC*

WINJS CODE SHAPING

CODE LOGIC FOR CONTROLLER (VIEW CONSTRUCTOR)

“INTERACTING WITH THE VIEW & MODEL”

- Read the object model, json array
- Create the hub tiles
  XHTML + Behaviour (js)
- On each tile: link to the generic details constructor page.
- Constructor logic

```
{
object: 12,
objectName: 'Contact Business',
showHome: true,
modelMethods:
{
            base: 'CONTACT_BUSINESS’
},
viewActions: true,
viewAttachments: true,
viewDefault: 'Summary',
viewHome:
{
            fields:
            [
                        name: 'tradename'
            ]
},
.....
```

Charms:
- Search: Contacts
- Settings
- Sharing: Messaging Conversation Post

Snapped view:
- Contacts