Behavior Driven Development (BDD)

With Mocking

An amazing set of agile tools that helps to create kick ass software

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Remeber

- *Throughout this lecture, please remember:*

Agile doesn't fix problems in your company. It simply brings them to light quicker.

As such:

Don't be Quick to Blame Agile

Software Without Requirements???

Question…

Agile Manifesto: [Favor] working software over comprehensive documentation.

We need requirements. They describe the features/behavior of the program being developed.

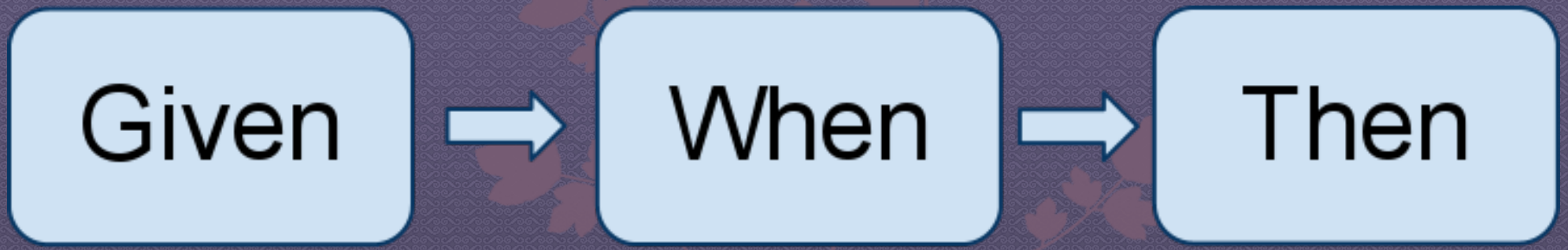
If we need requirements, then why not write requirements in a way that they can be verified similar to source code?

Behavior Driven Development

What is it? The name gives it all away...

- *Behavior/Feature*
  - *What your software will do described through requirements (mocking,stories,begging).*
- *Driven*
  - *To cause or guide the movement of something.*
- *Development*
  - *The creation of software through engineering and coding.*
- Behavior Driven Development
  - The development of software guided directly by described behavior and features (and mocking).

Given, When, Then



What software will look like to user

Things that the user will do.

What the user should expect.

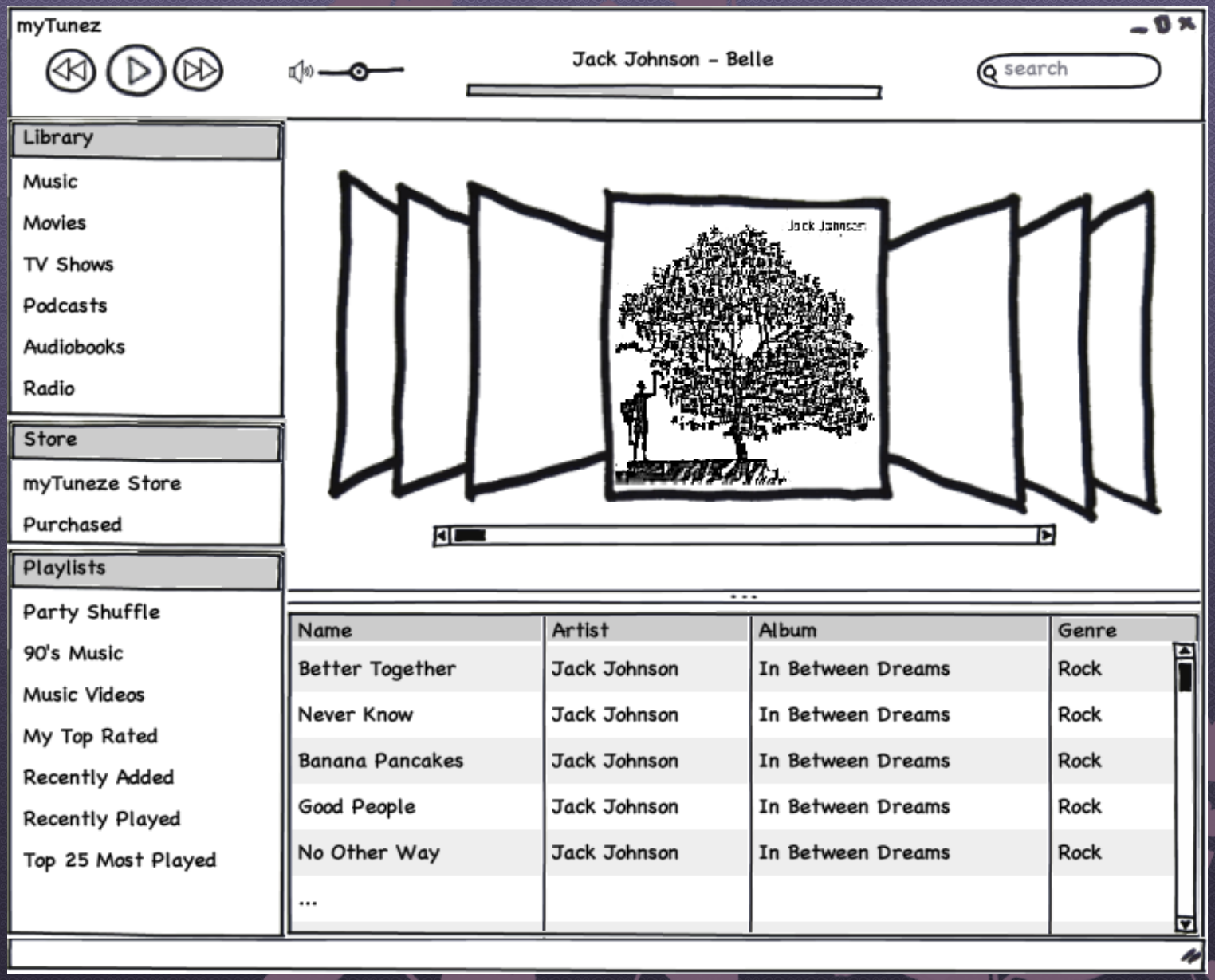
- *Given Eric is authorized*
- *When he visits the "About Me" Page*
- *Then he should still be authorized*
- *And the name "Eric" is shown*

Discovering Behavior

- *Mockup the system using mocking software (Balsamiq for example).*
  - *Create user stories from mockup and or*
  - *Create mockup from user stories*
  - *Hack away on Research and Development but keep that code out of production.*
- *Discover ALL behavior and features of the mockup and write Scenarios with Gherkin*
- *Only then should you write code being pushed to production.*

GUI centric software

Example Mockup



http://balsamiq.wpengine.netdna-cdn.com/images/samples/mytunez.png

Why It is So Cool

- *Aligns With Agile Manifesto:*
  - *Favor code over documentation*
- *Forces Product Owner To Focus*
  - *Mock-out and verify what stakeholders want (Lean Development) before writing a line of code.*
- *Forces Developer To Focus*
  - Developer codes exactly what is needed.
- *Requirements and code Are "Verified"*
  - *Continuous integration of requirements*
  - *Continuous integration of code*

Why It is So Cool - Part 2

- *Describes Your System Twice*
  - *The behavior of your system is written in a programming language.*
  - The behavior of your system is written in a DSL.
  - *Makes your software more robust.*
- *Same Scenarios In Different Languages*
  - *Ruby (Cucumber), C# (SpecFlow), PHP (Behat), Java (???)*
- *Iterative Development*
  - *Implement scenarios and push to production as fast as possible.*

Why It is So Cool - Part 3

- *100% Coverage of the Behavior of Your Software*
  - *Easy to refactor*
  - *Any bugs caused by changes are found out: if you changed the behavior of your program you will find out!*
  - *See Describes your system twice.*

YOU CAN'T BREAK YOUR PROGRAM!

Arguments Against BDD

- *Code Isn't Dry*
  - *BDD is too wordy. But! Depends on the language and depends on the robustness of your code.*
- *Product Owner Can's Use BDD*
  - *But - The Domain Specific Language can be written to a level appreciated by the Product Owner.*
  - *If they can't explain what they want to you in their own language, you need a new product owner.*
- *Assumes you Know the Problem*
  - *But - If you don't know the problem then how can you code a solution?*
  - *Doing R&D - Don't use BDD. Have fun and Hack.*
  - *Sticking that code in production? Not without BDD.*

Arguments Against BDD Part 2

- *Don't Use In Startup - No Upfront Value*
  - *But! BDD forces the startup to focus on their core products and work closely with customers.*
  - *Remove code before it is even written!*
- *Product Owner Can's Use BDD*
  - *But - The Domain Specific Language can be written to a level appreciated by the Product Owner.*
  - *If they can't explain what they want to you in their own language, you need a new product owner.*
- *Assumes You Know the Problem*
  - *But - If you don't know the problem then how can you code a solution?*
  - *Doing R&D? - Don't use BDD. Have fun and Hack.*
  - *Sticking code in production? Not without BDD.*

Arguments Against BDD Part 3

- *Have to Change the BDD A Lot*
  - *If you are changing the BDD a lot does that mean BDD is broken? OR*
  - *Does that mean the Product Owner had you write something they really didn't want?*

Questions?

source: http://www.flickr.com/photos/katemonkey/122489910/