

Warwick Business School - Technical Test (Software Engineering)

The Test

The Business School runs a “Business in Practice” module as part of one of its courses. In this module, students work in teams to run a business in a simulation package. This package provides static json files of various key performance indicators (KPIs) for the teams on each day of the challenge.

A basic standalone web page was quickly put together at some point in the past to display these metrics, but the academic in charge of the module has said they’ve received a lot of negative feedback from students about how poorly the data is presented and have asked if it can be “made to look more modern and maybe more visual and interactive”. Looking at the code, you also notice that it hasn’t been touched for a long time, is very outdated and could be significantly improved.

The code is contained in the zip file that you will have received. The zip contains an index.html file and a data directory with some json files.

Your task is threefold:

1. Improve the look, feel and functionality of the site
2. Improve the code, showcasing both your frontend **and** backend skill sets. Our preference is for you to use Java or Python for any backend component.
3. Record a walkthrough of your finished solution and upload both the recording and code to a shareable space.

General Guidance

We are looking to get an insight into what you are capable of producing based on a limited brief. It is an opportunity for you to showcase your skills, knowledge, design and full-stack coding abilities.

Think of the different types of users who may be accessing the site, and how their requirements might differ:

- Students who are members of a team taking the module.

- Academics who are running the module.
- Support staff who help co-ordinate the module.

Try to think of different ways of presenting the data to make it more interesting and more easily consumed, in meaningful ways, to different users. What other functionality might benefit different users?

Think of the walkthrough as part stakeholder demonstration and part peer review. The stakeholder part should focus on showcasing the UI and functionality, whilst the peer review part should focus on the code you have done and the reasons why you've decided on certain approaches. The total recording should not exceed 1 hour.

We do not want...

We are **not** looking for video production abilities or a sales pitch for particular frameworks / libraries.

What we are looking for...

We **are** looking for an understanding of:

- what the final solution looks like (we value innovation and thinking outside the box)
- what improvements you've made to the user experience, functionality of the application and code base
- why you've adopted the approach you have and the thinking behind your design decisions from both an architectural and user experience perspective
- what further enhancements you might make given more time

Your solution should be as "production-ready" as you can make it. Think about how you'll address issues such as security, accessibility and the user experience, alongside producing clean, performant and well-written code. If you decide to use a framework/library or even a snippet of code authored by another, then where appropriate, please explain your reasoning behind its deployment and chosen version. Finally, please be sure to demonstrate all the functional areas of your submission. If we do not see it demonstrated in the walkthrough then we will assume it does not work. Bear in mind, sometimes less is more. We would prefer limited functionality done to an extremely high standard as opposed to an ill thought out and half implemented solution.

Submitting your Test

Please upload your recording and code to a sharable space such as at <https://www.filemail.com/> and notify david.edie@wbs.ac.uk.

Good luck!