UNT COLLEGE OF ENGINEERING
EST. 1890

Denton Digital Kiosk
Whippersnappers and the Old Guy
## CSCE 4925 Information Technology Capstone II

Abstract

The Denton Digital Kiosk project was inspired by a digital kiosk that was setup in the downtown area of a neighboring major city. Most communities do not have the money to setup such a kiosk but could benefit greatly from its utility for community awareness, tourism, and community feedback.

This project is meant to develop an open source kiosk framework that can be applied by anyone and with minimal hardware requirements. The kiosk has been developed in Angular has been tested to run locally on a Raspberry Pi 3B+.
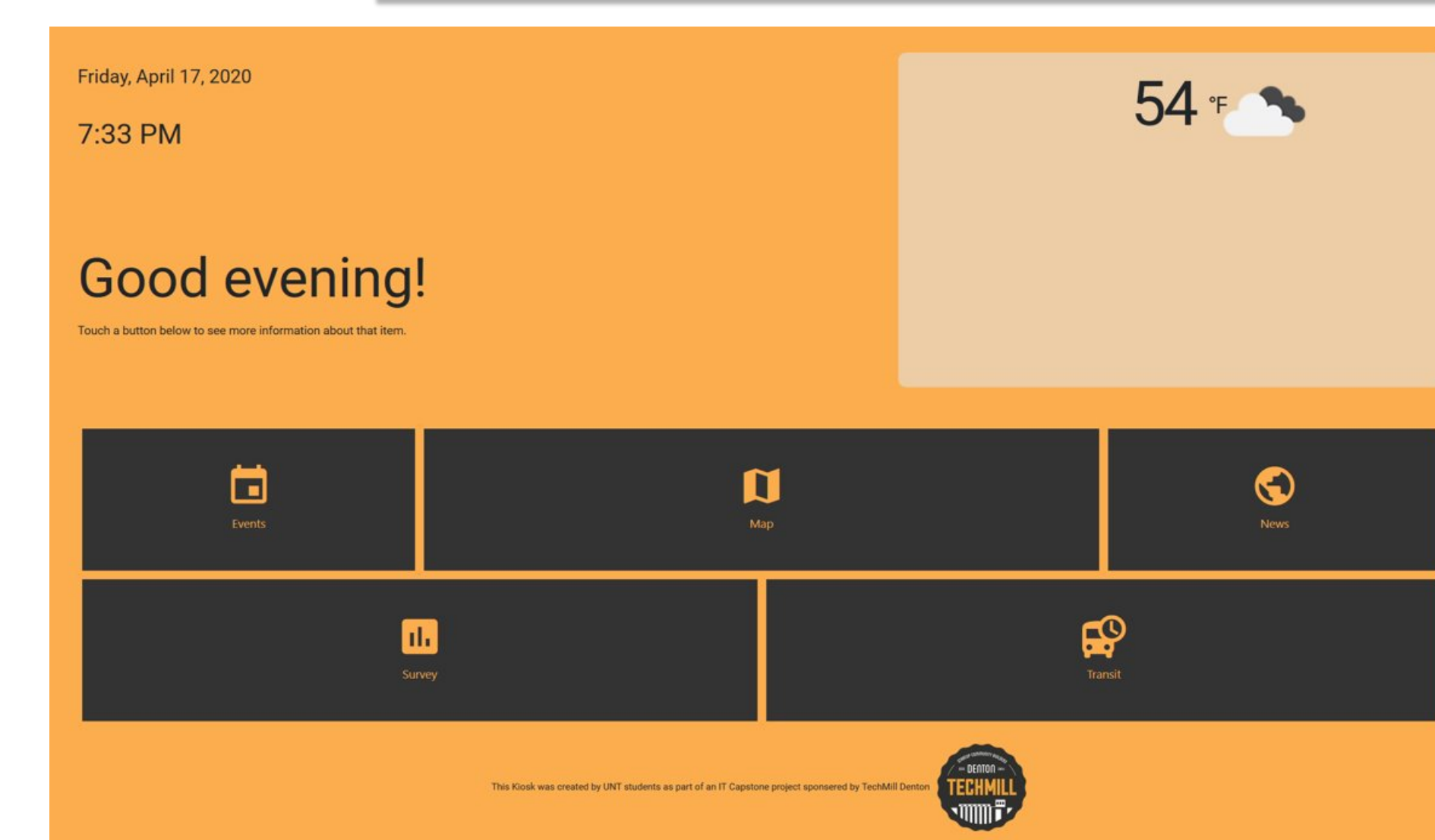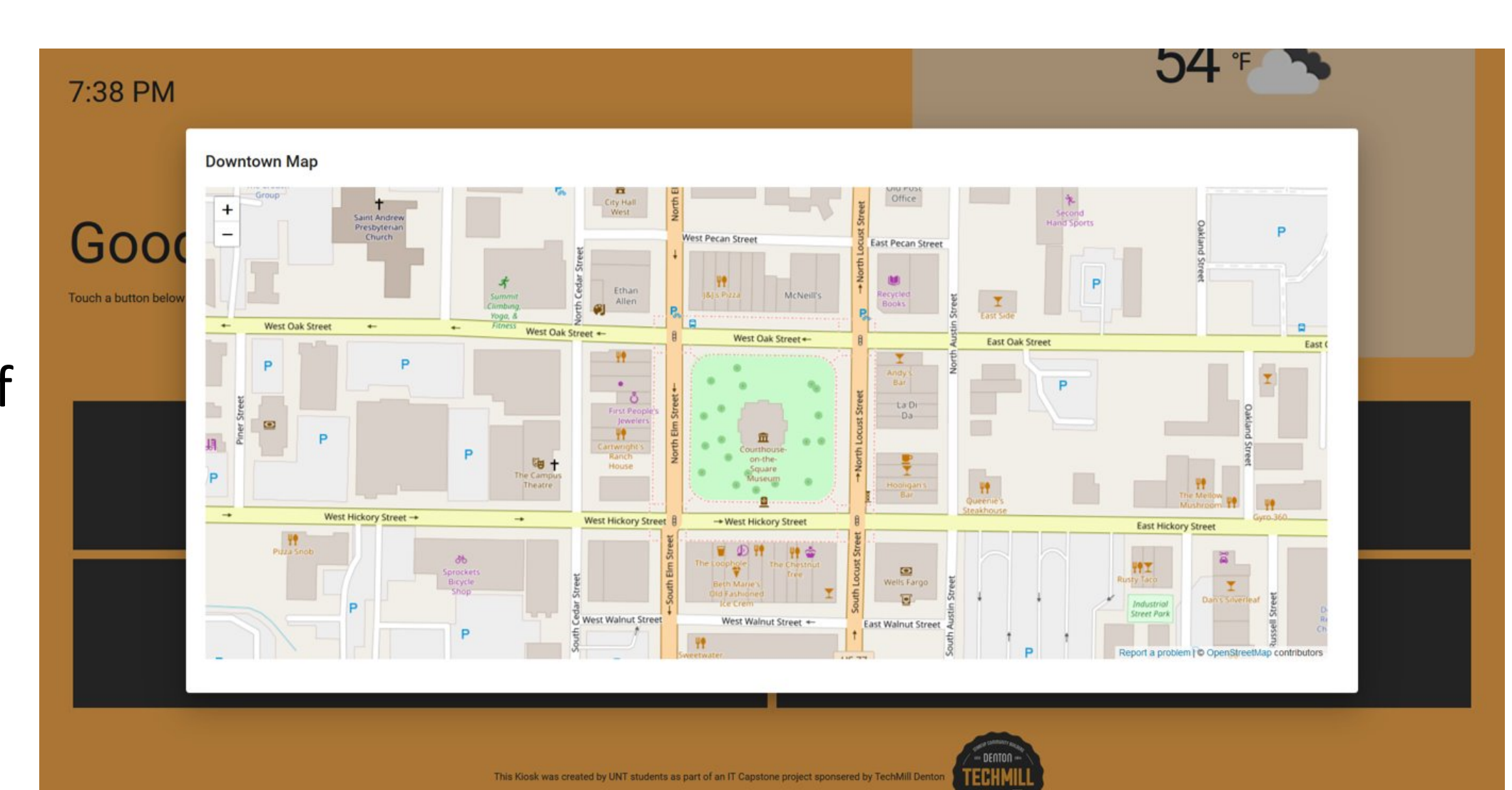
The homepage displays the time, date, and weather. The greeting changes depending on the time of day. And the weather updates every hour. Current weather will soon be joined by air quality and additional weather data. When a button is pressed, a material design dialog modal opens to display the relevant information.

Events are populated from Eventful.com using their API. As of writing, the events do not come sorted. There are plans to sort the events in order of occurrence with impending events at the top.
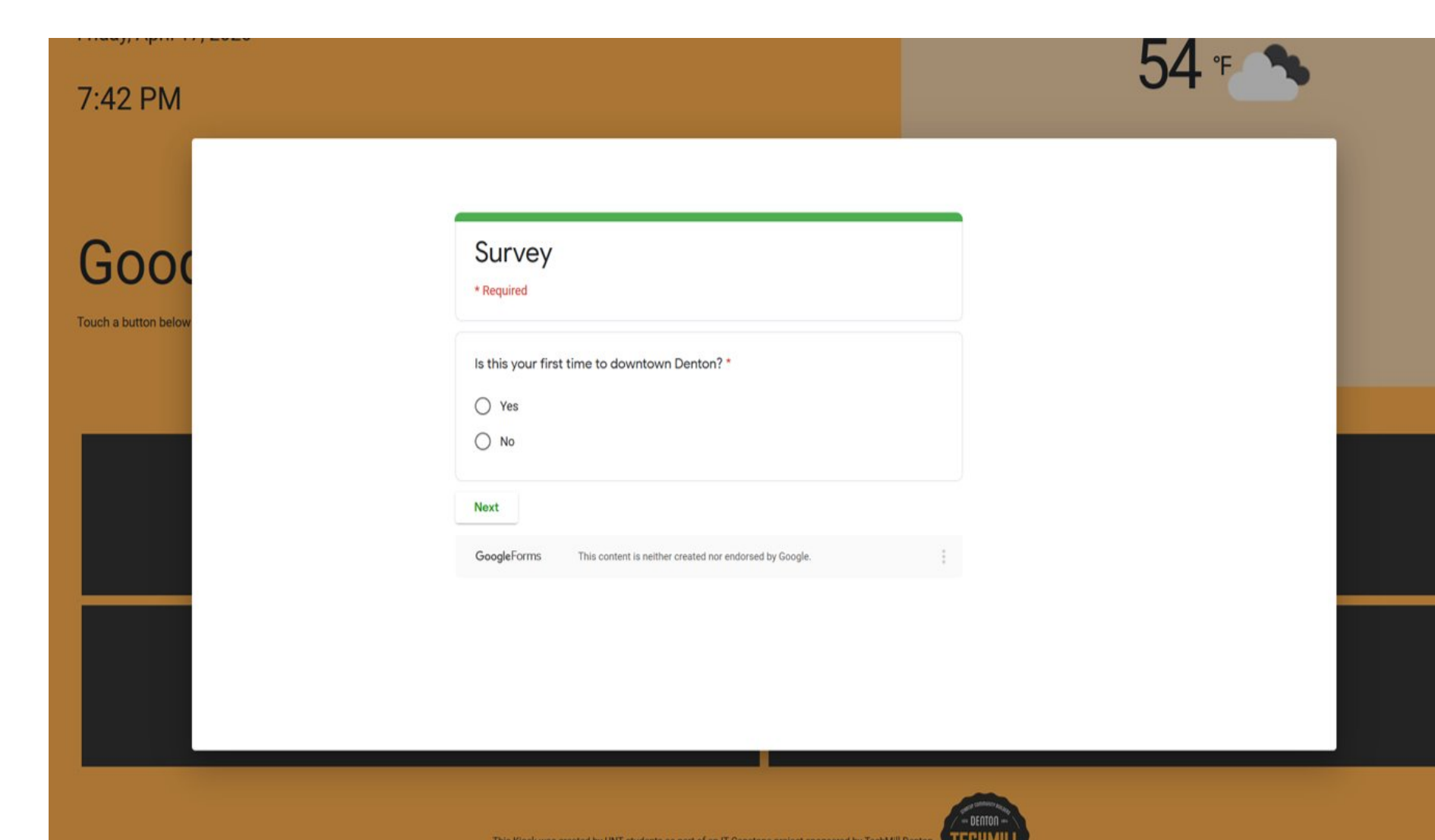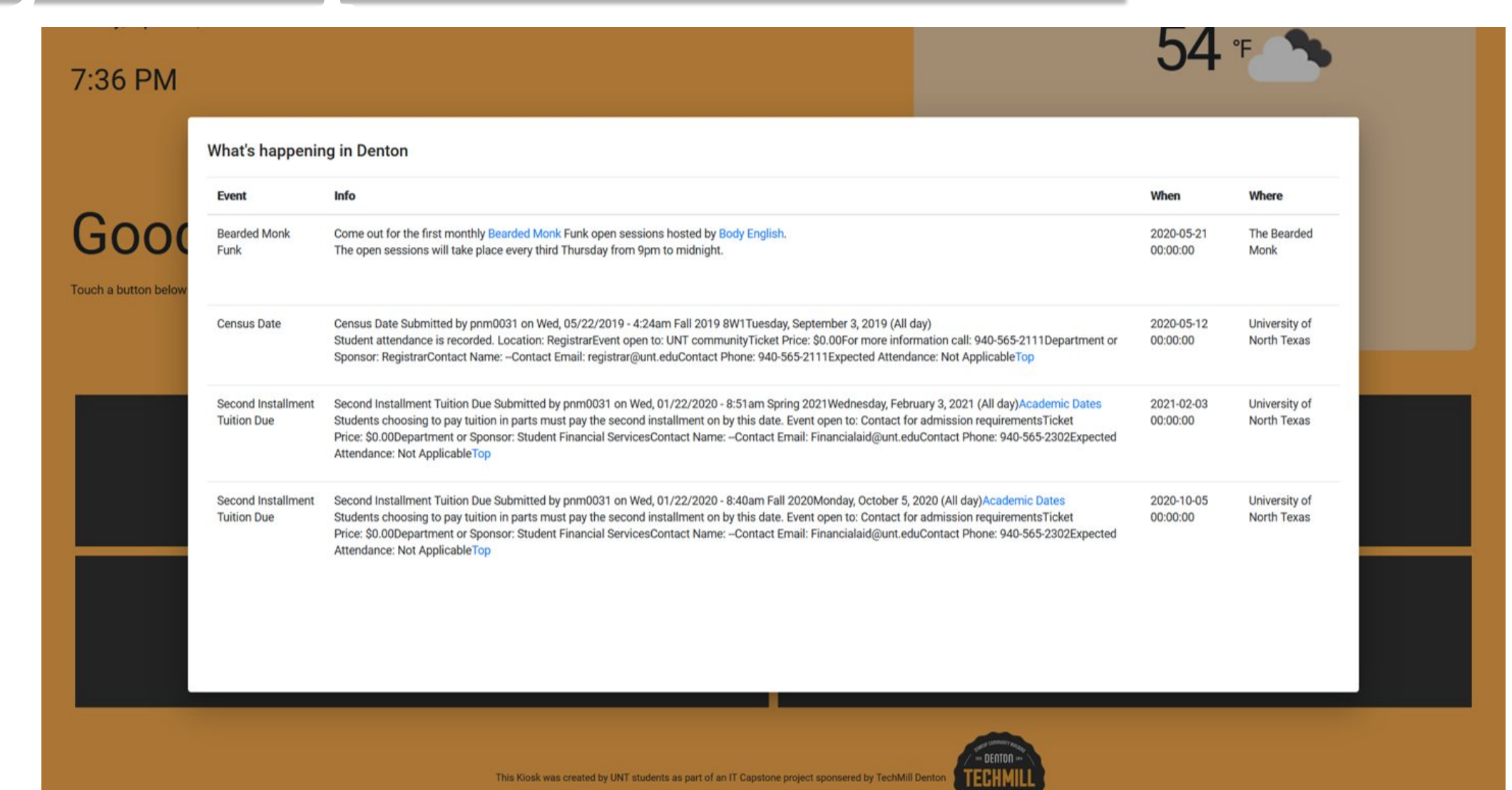
Surveys are created and customized through Google Forms and embedded in the dialog using an iframe. Survey submissions are stored in the Google account associated with the survey.

The map is embedded with an iframe and comes from OpenStreetMap.org. The starting location of the map is included in the URL so it will return to that position each time the map is opened.

Future Improvements

- Better weather icons
- Points of interest on map window
- Live transit update

Sponsors

Kyle Taylor of Techmill
Techmill is a non-profit organization and startup and tech builder in Denton, educating, supporting, and building density of talent in our community.

STARTUP COMMUNITY BUILDERS
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TECHMILL

David Keathly (Instructor)

Experiences and Challenges

- Angular/TypeScript was new for us. We had some exposure to JavaScript, HTML and CSS but Angular has added some extra curve.
- For some of us, this was the first time using an API of a remote web service. This meant learning how to make the API calls, collect and use the responses, in addition to reading the API documentation as usual. Fairly simple now that we have the hang of it.
- A major challenge has been switching 100% to virtual meetings especially with some of us having lackluster internet service.

Work Left to Complete

- News diaply
- Usage analytics
- Air Quality
- Polishing interface
- Replacing filler text

Our Team

From top-left to right:
Matthew McKelvain
Kendal Ballard
Jon Mays
Drew Ballard