WEB-BASED APPLICATION PROJECT

GROUP NUMBER: 21
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FINAL DOCUMENT

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Platform based development

GROUP PLAGIARISM STATEMENT
FACULTY OF ACCOUNTING AND INFORMATICS DEPARTMENT OF INFORMATION TECHNOLOGY

Group Plagiarism Statement

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Table of Content

Introduction

The social problem that we propose to tackle in our project is Severe Acute Respiratory Syndrome Coronavirus 2 commonly known as the Corona Virus.

Human Coronaviruses are common throughout the world. There are many different coronaviruses identified in animals but only a small number of these can cause disease in humans.

On 7 January 2020, 'Severe Acute Respiratory Syndrome Coronavirus 2' (SARS-CoV-2) was confirmed as the causative agent of 'Coronavirus Disease 2019' or COVID-19.

In this document we will cover: the problem, solution, how we designed the web application(app), Tools used, programming languages, functionality and limitations.

The problem

The problem is that the people have a lack of understanding about the virus that we are facing as there is a lot of fake news or conspiracy theories being spread. Those misleading theories cause panic, fear and people not believe that the Corona Virus is real and deadly.

During this lock down a lot of people did not follow the guidelines of the World Health Organisation and the governments' covid protocols. This resulted in an increase of the infection rate, although a lot of information was propagated, it was not done in a "pretty" or an "aesthetic" manner.

This can be seen in Figure: 1 and Figure: 2. This caused a lot of people to become uninterested and disregard the guidelines, as the statistics prove (in Figure: 3), there was a rise in the infection rate.

Figure 1: Unappealing and bland website

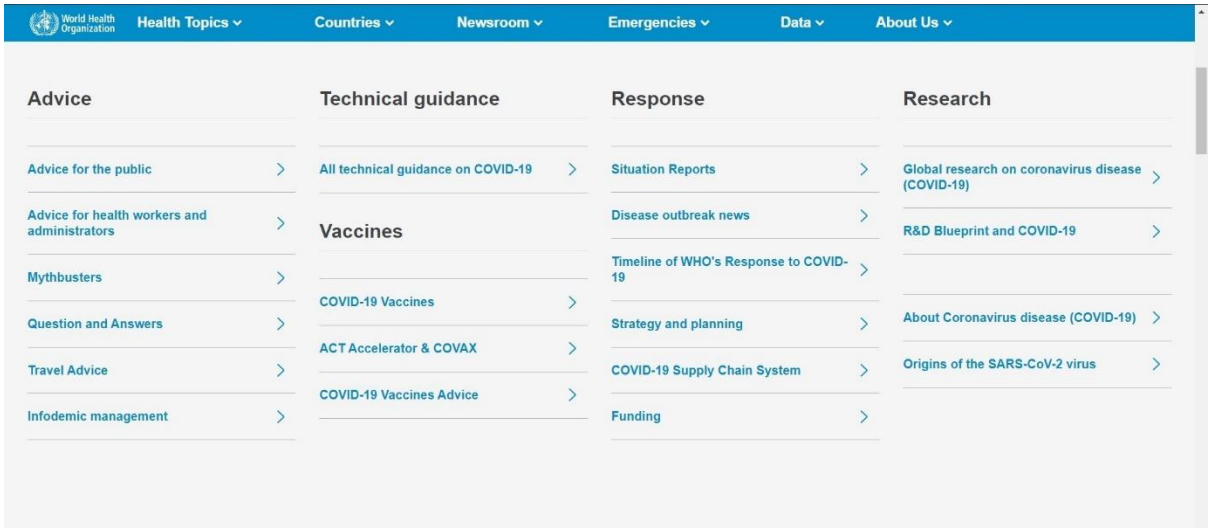


Figure 2: Disorganised website

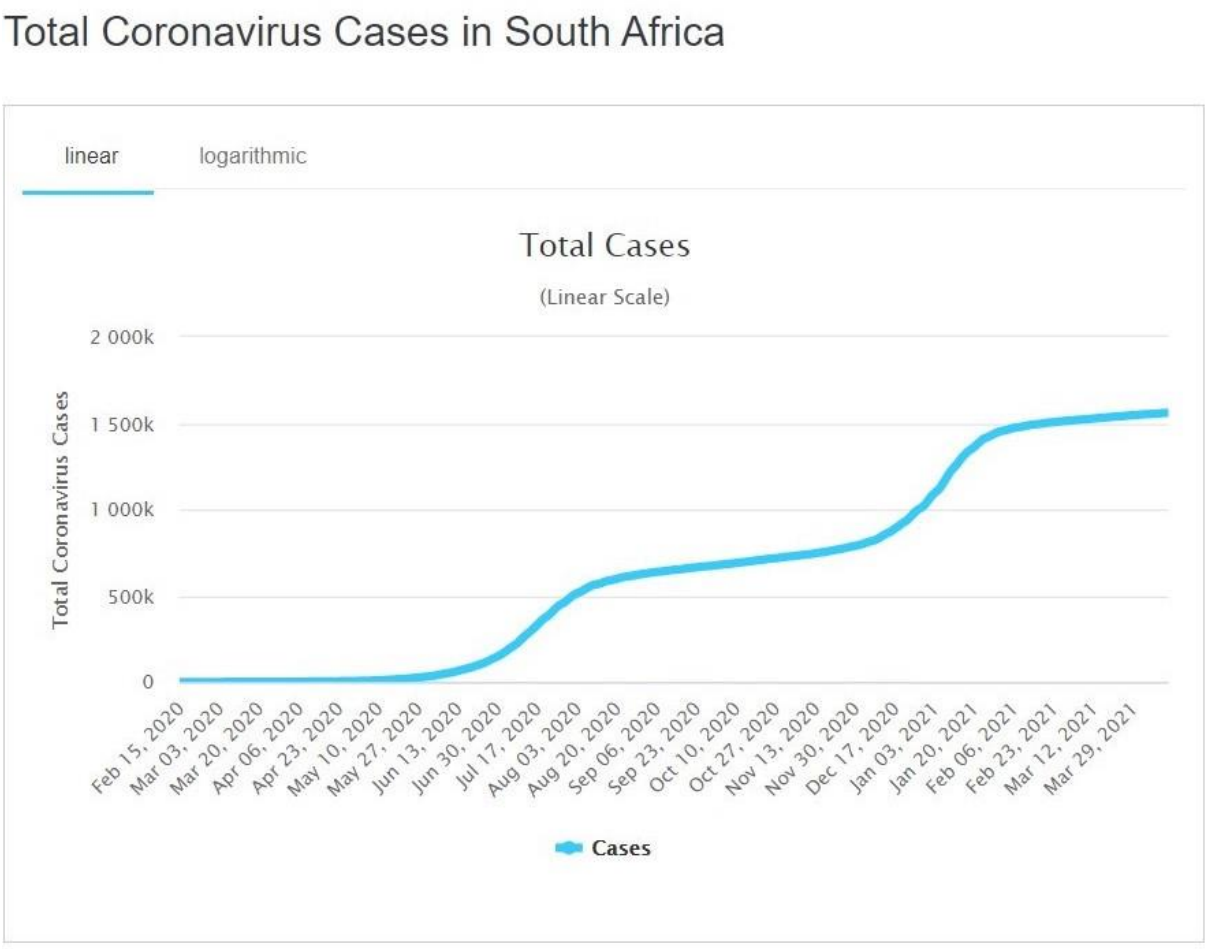


Figure 3: Increase in Covid statistics

Proposed solution

The solution that will be developed is simply creating a web application that portrays the data, statistics and information in a more pleasing aesthetic. This will keep the users' attention while also educating them. The web application will have interactive features such as a blog where professional health care workers can write about their experience or advise tips on how to stay safe. The web application will also have an online test that will give the user a recommendation as to how to proceed, whether it is advisable to see a doctor or simply what measures should be taken. Finally, the web application will integrate an API to deliver the latest statistics regarding the number of deaths, recoveries, infections and news feeds. All of this will be displayed to the user in a layout, format and colour scheme.

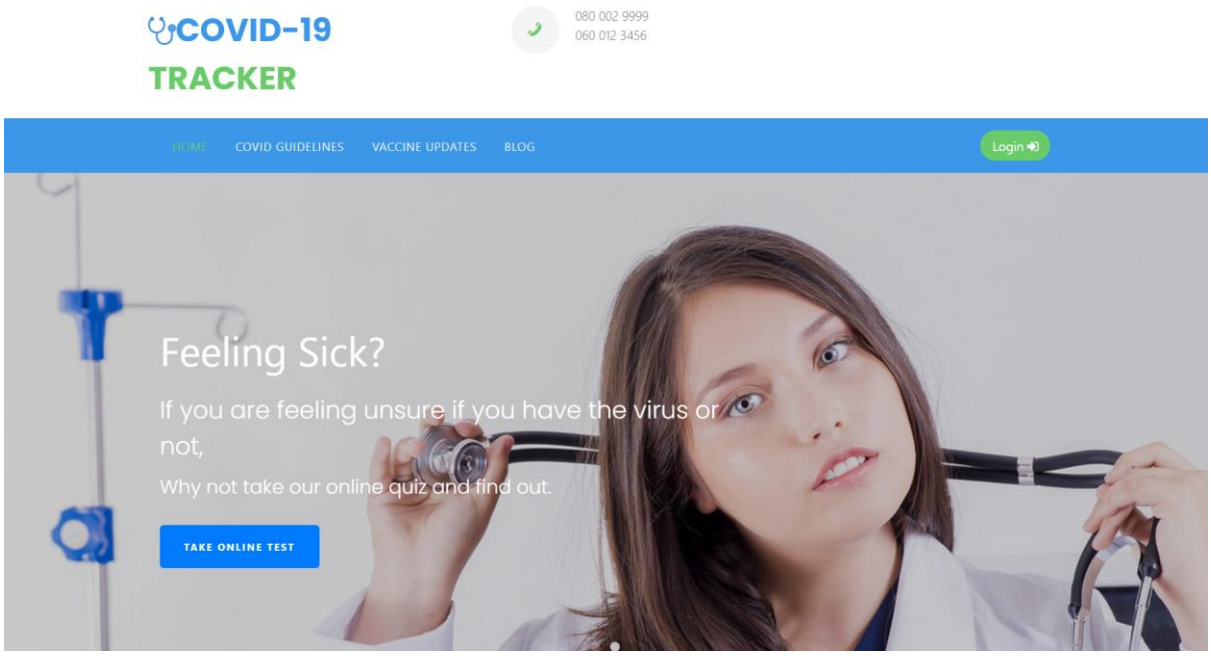
Aims:

- Entice the user to read and understand the serious social effects this virus has caused.
- Educate the general public on how to combat this virus.
- Elaborate on what to do if one has the virus.

Objective:

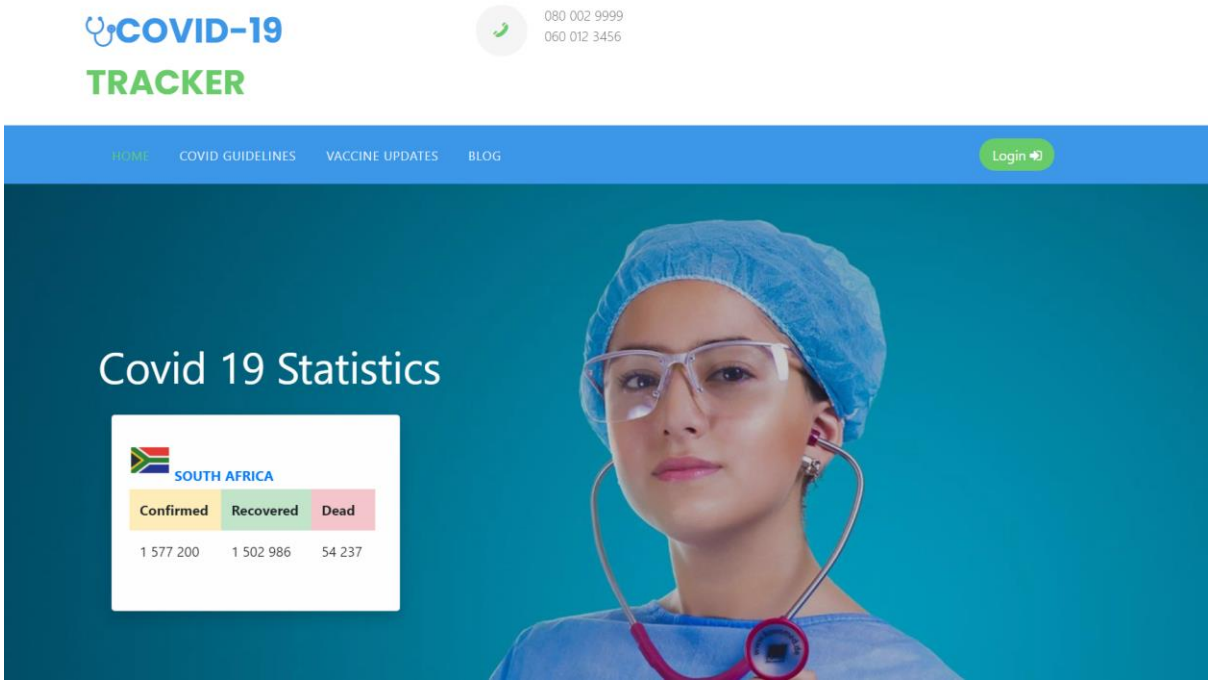
- Enforce the government's COVID protocols especially social distancing.
- Decrease the covid infection rate by education and propaganda.
- Assist in generating support for those who are suffering.

How we design the web app

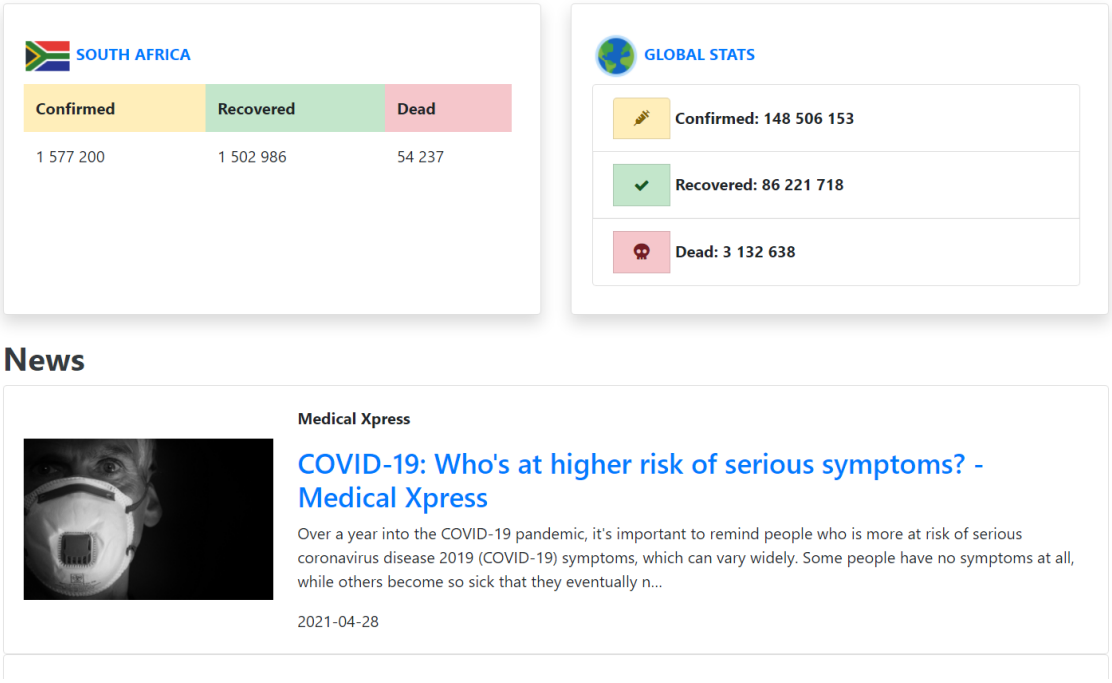


We used three primary colours: White, Green and white. In this frame here we have a landing page that is written Covid-19 Tracker at the top left with the body prompting the user to take an online test.

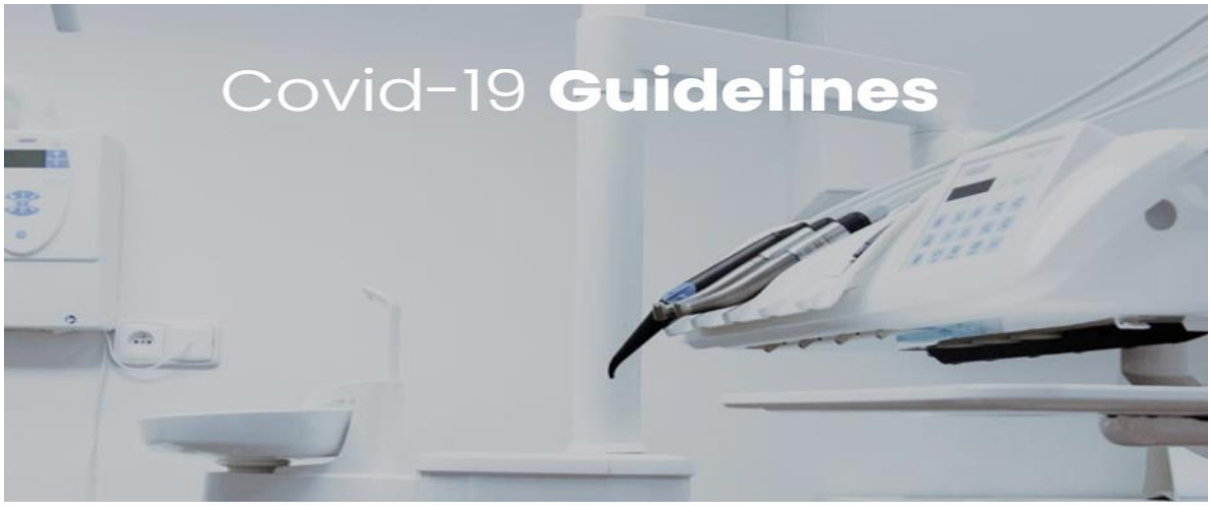
In the navigation bar we have Home, Covid Guidelines, Vaccine updates, blog and Login. In which the user can click the links and access different parts of our website in a quick manner.



In this frame we have displayed the Covid-19 Statistics



This frame above shows Covid-19 related news.



ABOUT COVID-19

What is COVID-19?

Human Coronaviruses are common throughout the world. There are many different coronaviruses identified in animals but only a small number of these can cause disease in humans. On 7 January 2020, 'Severe Acute Respiratory Syndrome Coronavirus 2' (SARS-CoV-2) was confirmed as the causative agent of 'Coronavirus Disease 2019' or COVID-19. The majority of the case-patients initially identified were dealers and vendors at a seafood, poultry and live wildlife market in China. Since then, the virus has spread to more than 100 countries, including South Africa.

Who is most at risk?

Currently, travellers to areas where there is ongoing sustained transmission of COVID-19 including Mainland China (all provinces), Hong Kong, Japan, Republic of Korea, Singapore, Vietnam, Taiwan, Italy and the Islamic Republic of Iran are at greatest risk of infection. Furthermore, the elderly, individuals with co-morbidities and healthcare workers have been found to be at a higher risk of death.

The above frame contains some of the guidelines.

The tools

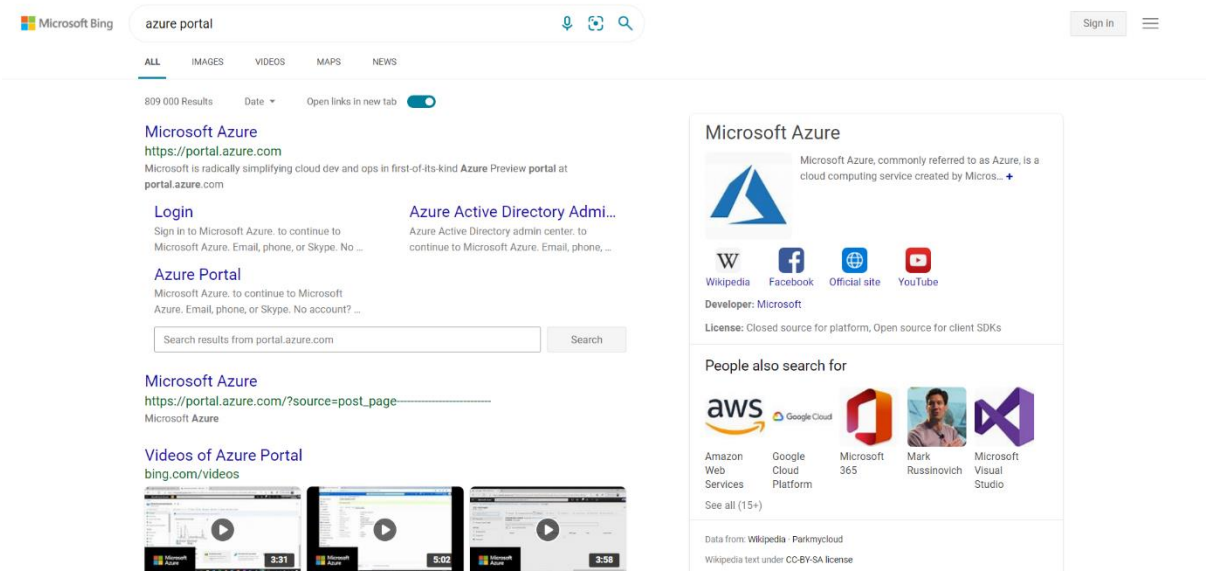
Below are the tools we used to build the web app:

- Visual Studio Community 2019
- Google developers
- Google Cloud Platform
- Microsoft Azure
- Microsoft SQL Server

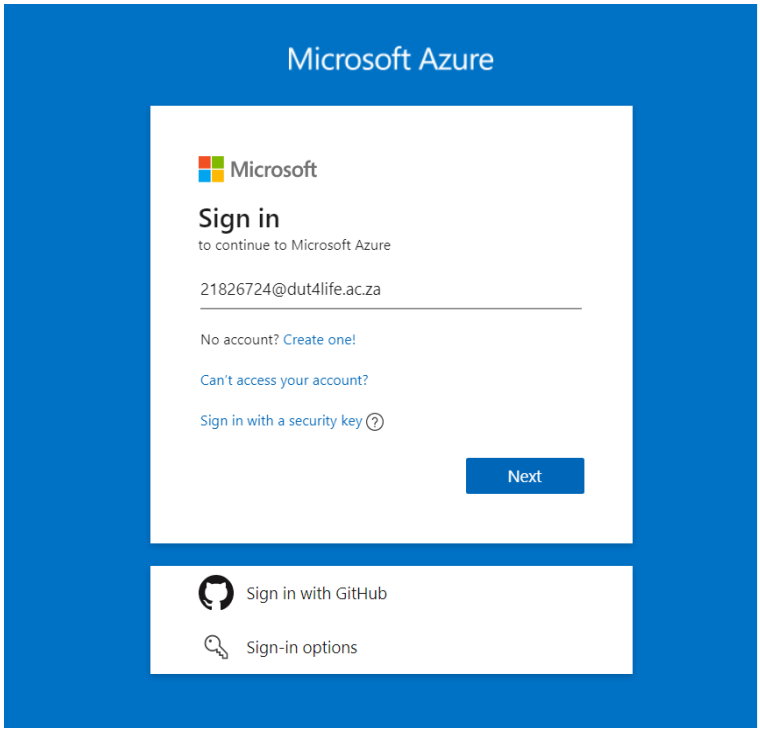
Deployment details

Step by step of deployment instructions below:

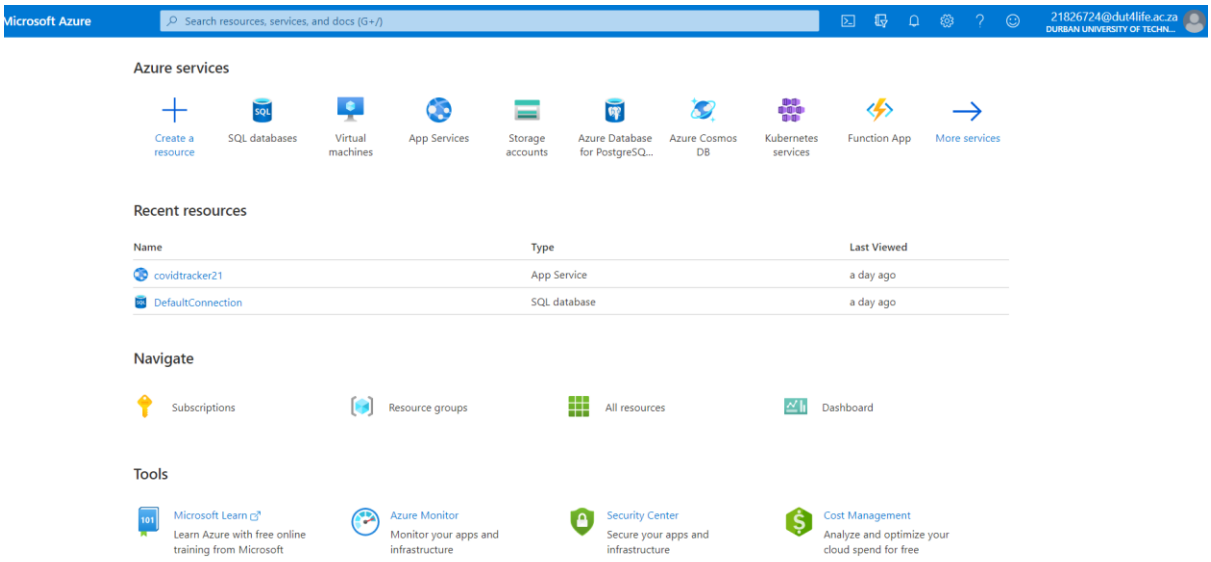
Step 1: Search azure portal in your browser.



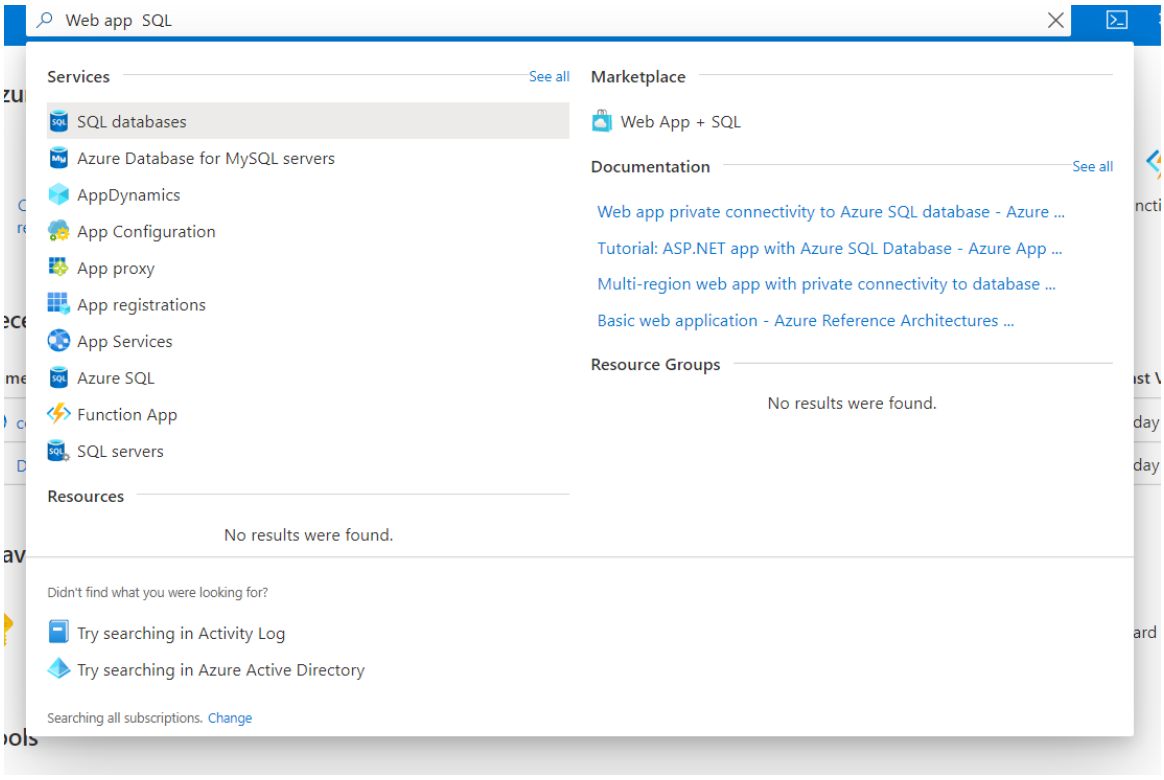
Step 2: Login to azure portal with your Durban University of Technology Credentials



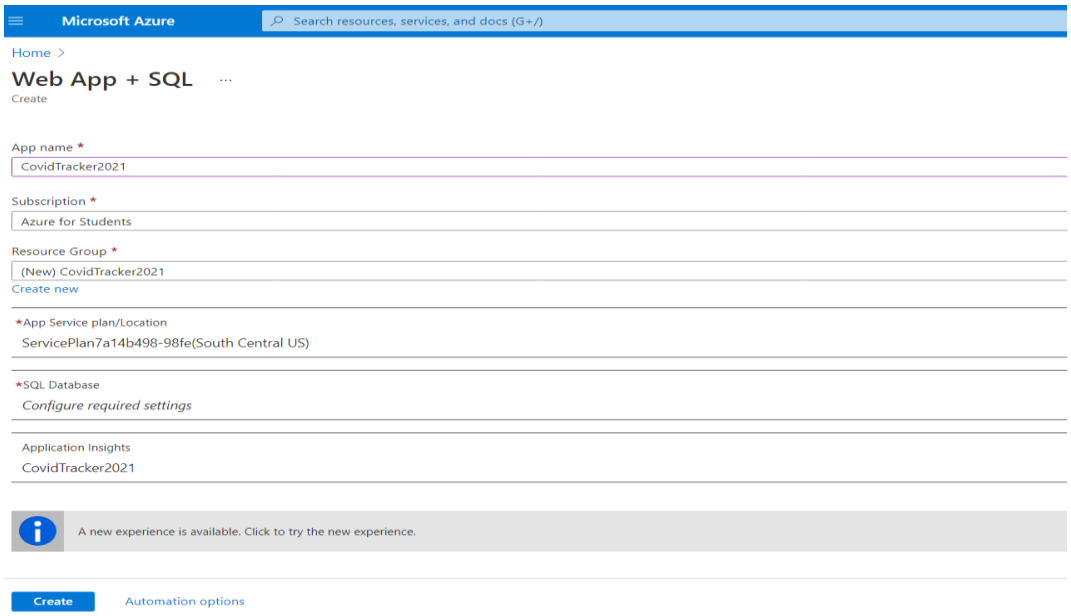
Step 3: Portal home page appears, select search bar.



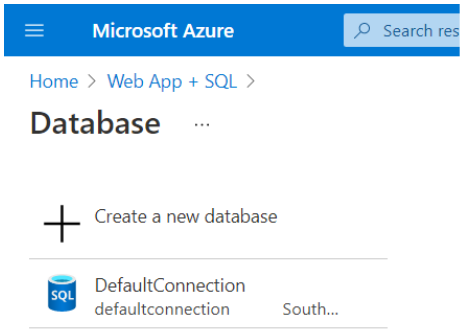
Step 4: Type in “Web app SQL” and click “Web App + SQL”.



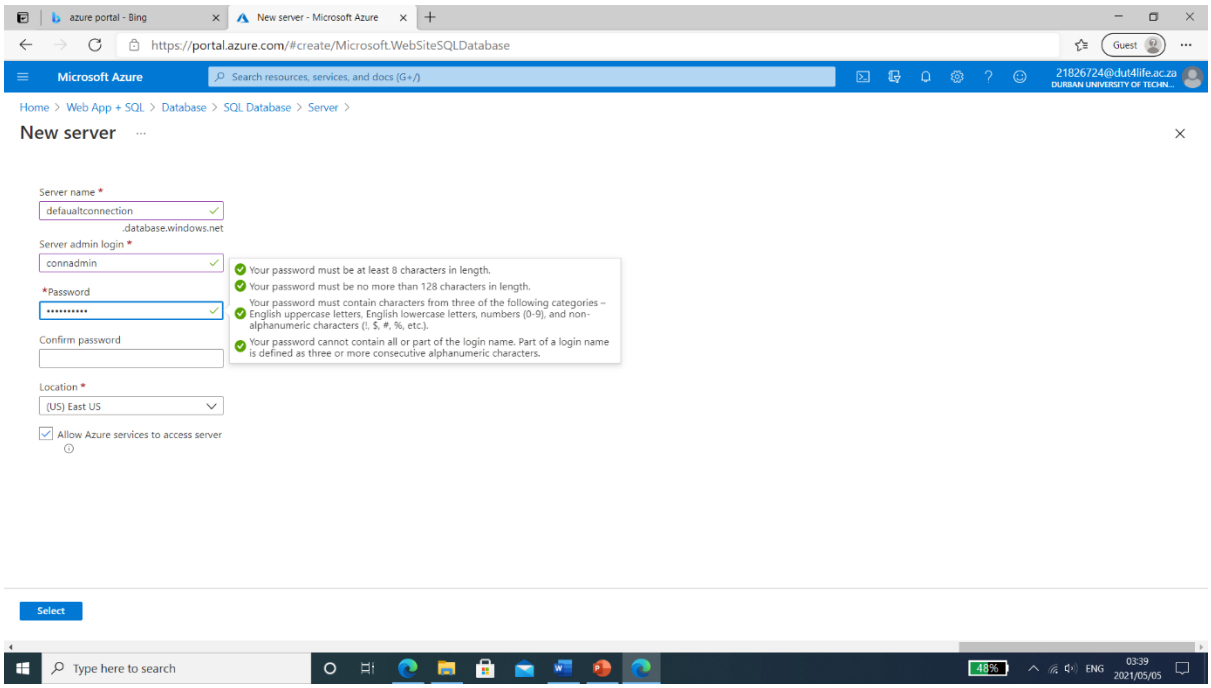
Step 5: You will see a creation menu where you need to fill in the details of website and where its going to be deployed.



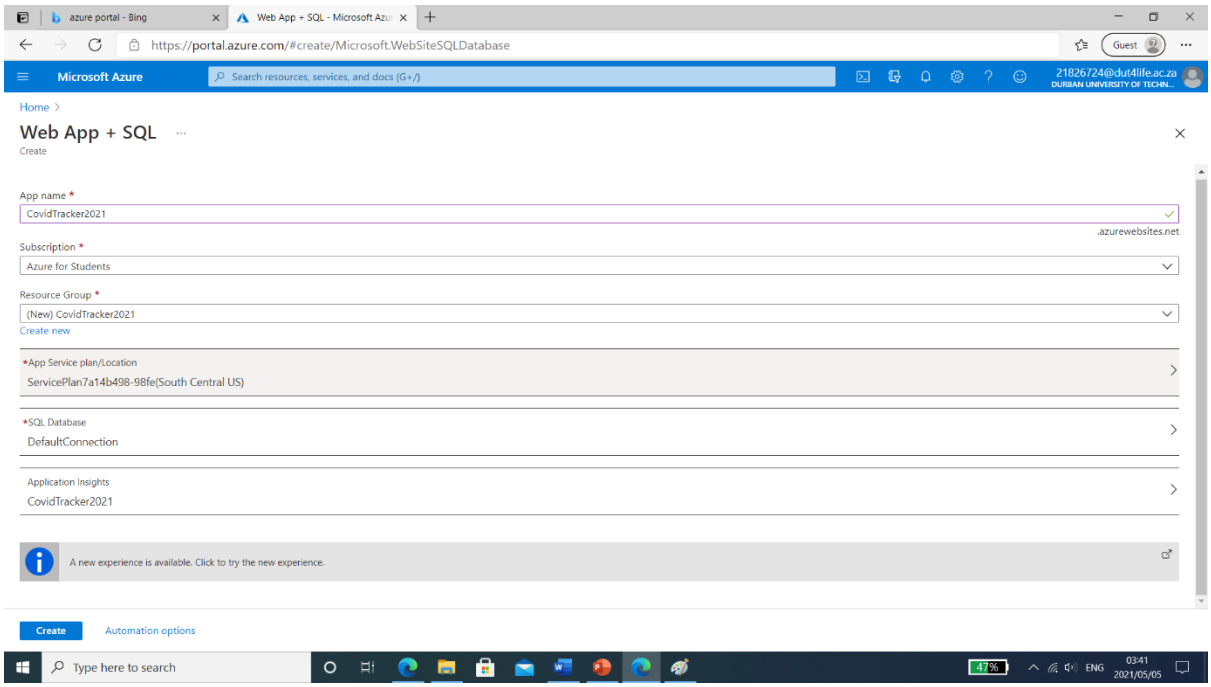
Step 6: Click “Create a new database” on Azure.



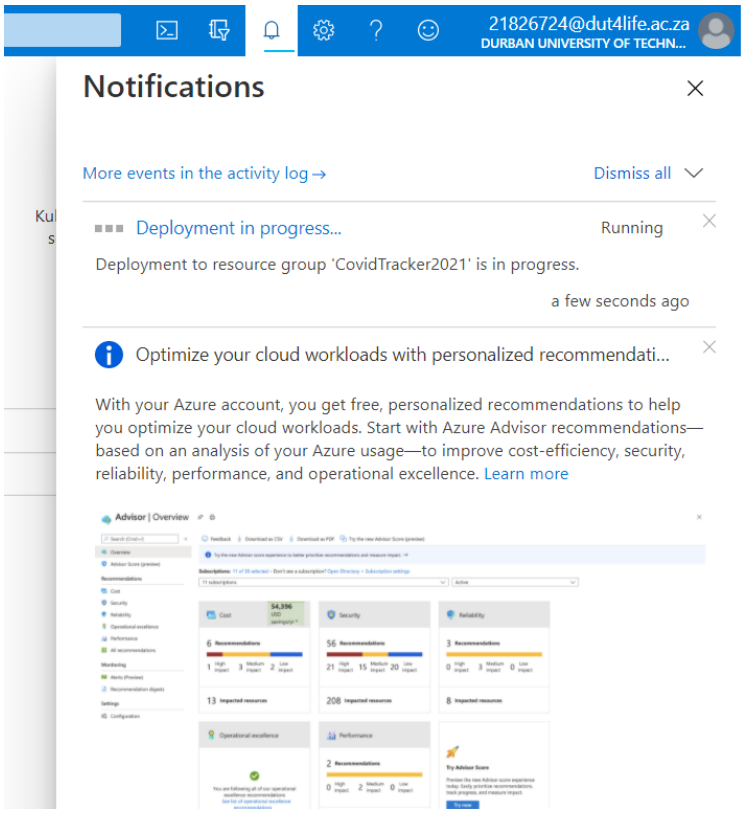
Step 7: fill in the details for your server.



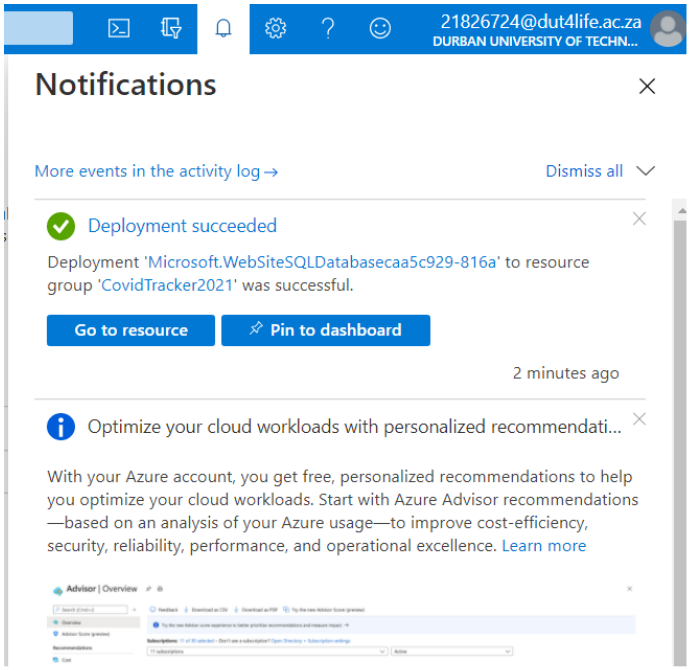
Step 8: Click the “Create” button to create your web application in the azure cloud platform.



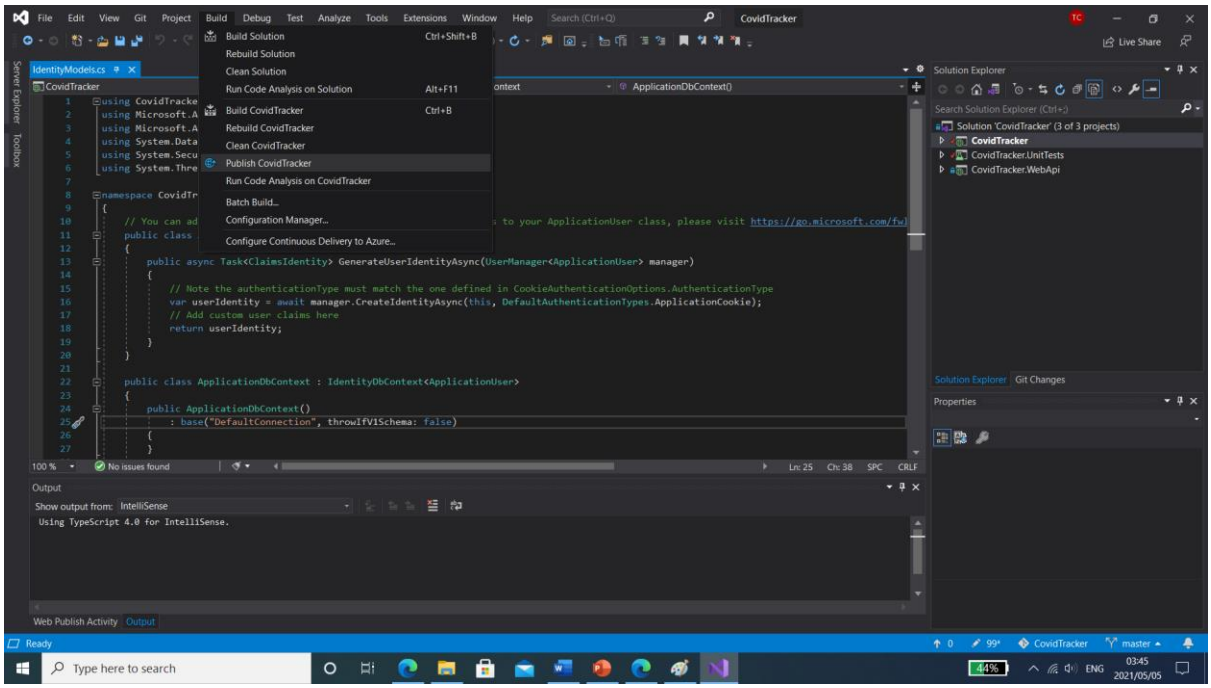
Step 9: Deployment in progress.



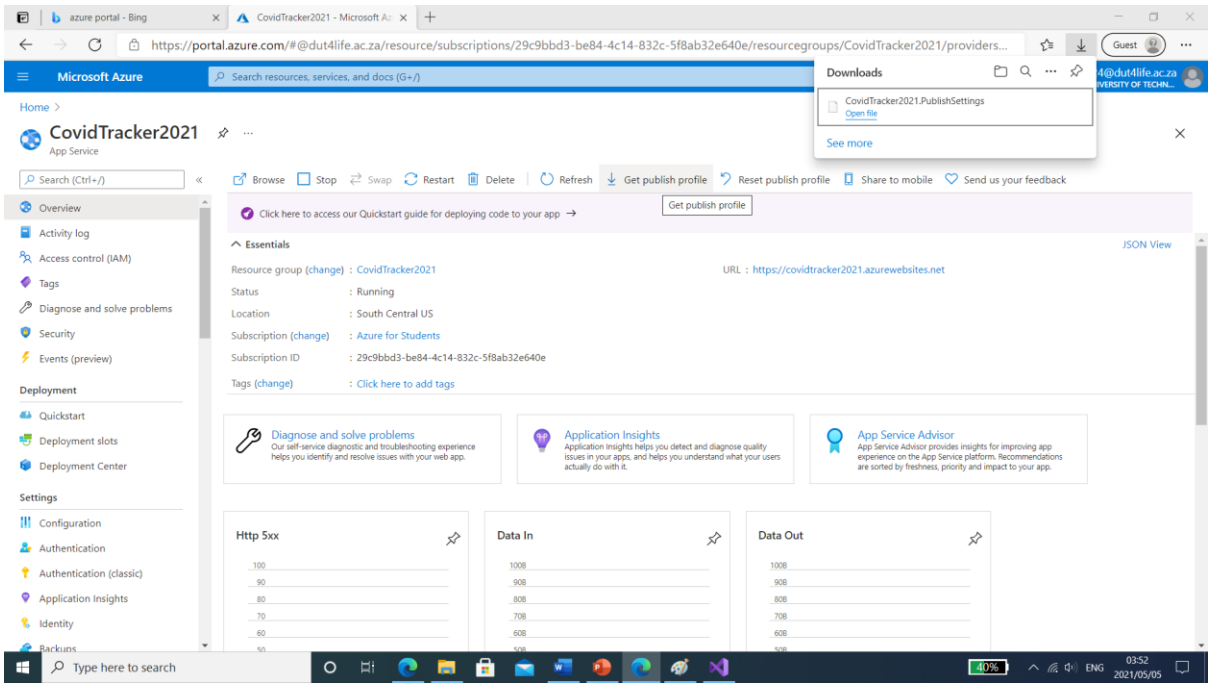
Step 10: Deployment succeeded



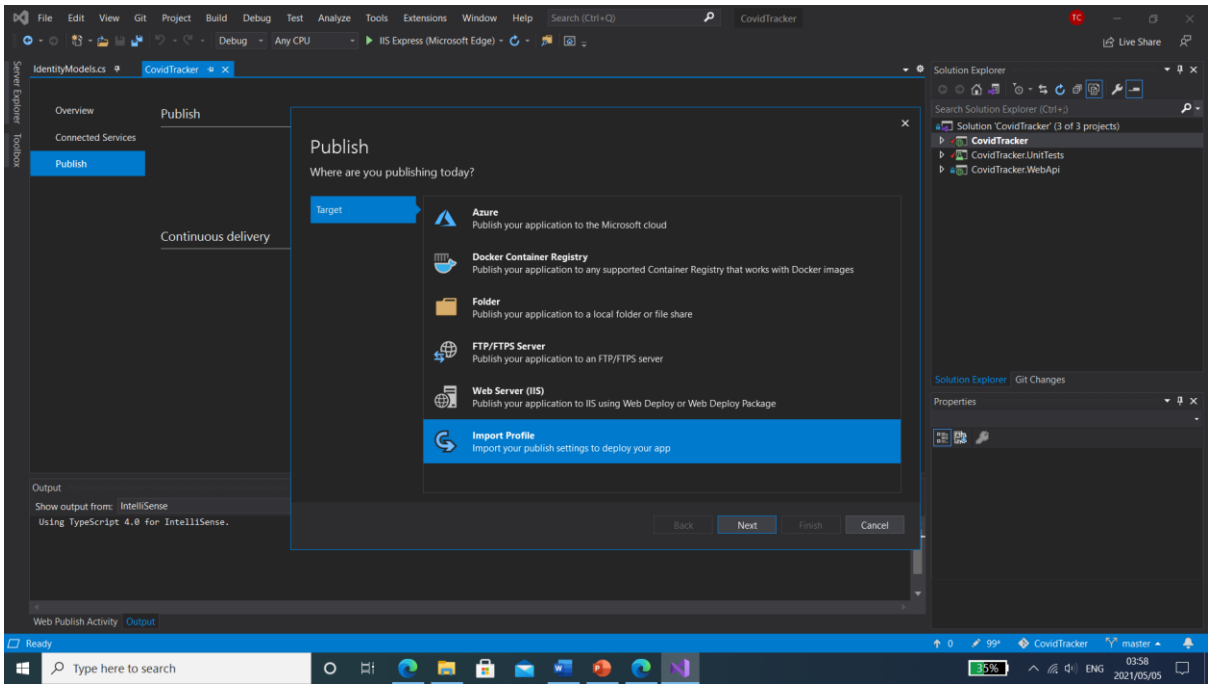
Step 11: Click “Publish” under the Build tab

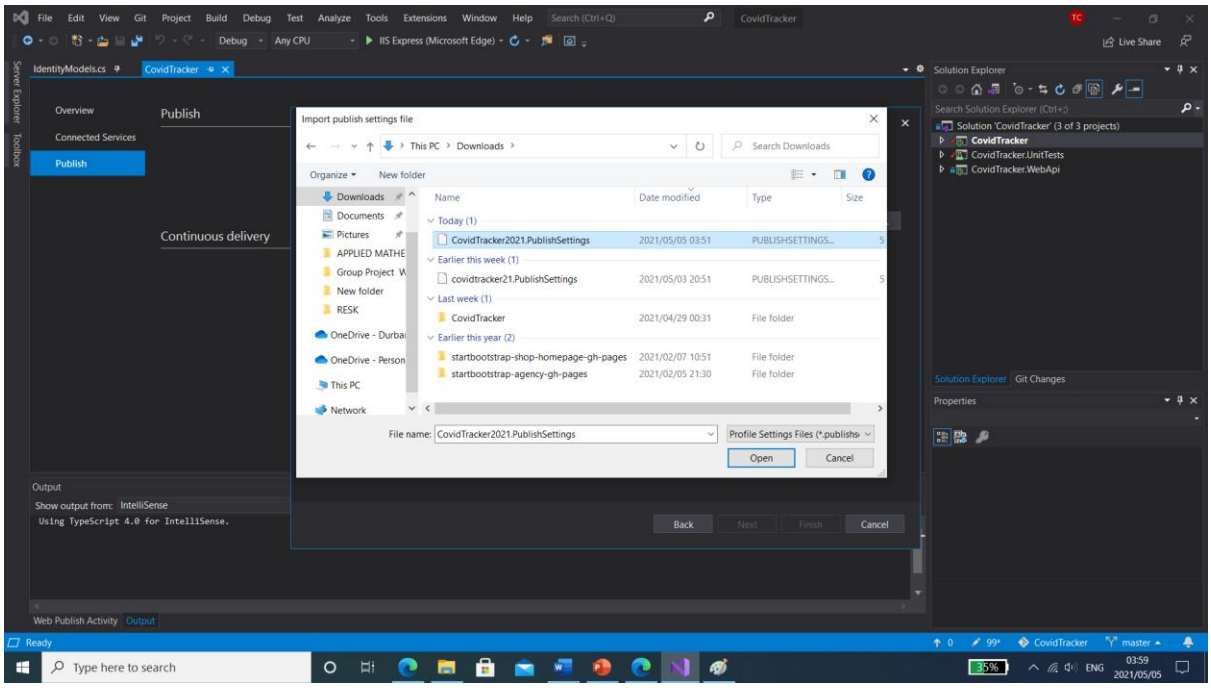


Step 12: Click “Get publish profile” and that should be downloaded to your Downloads folder.

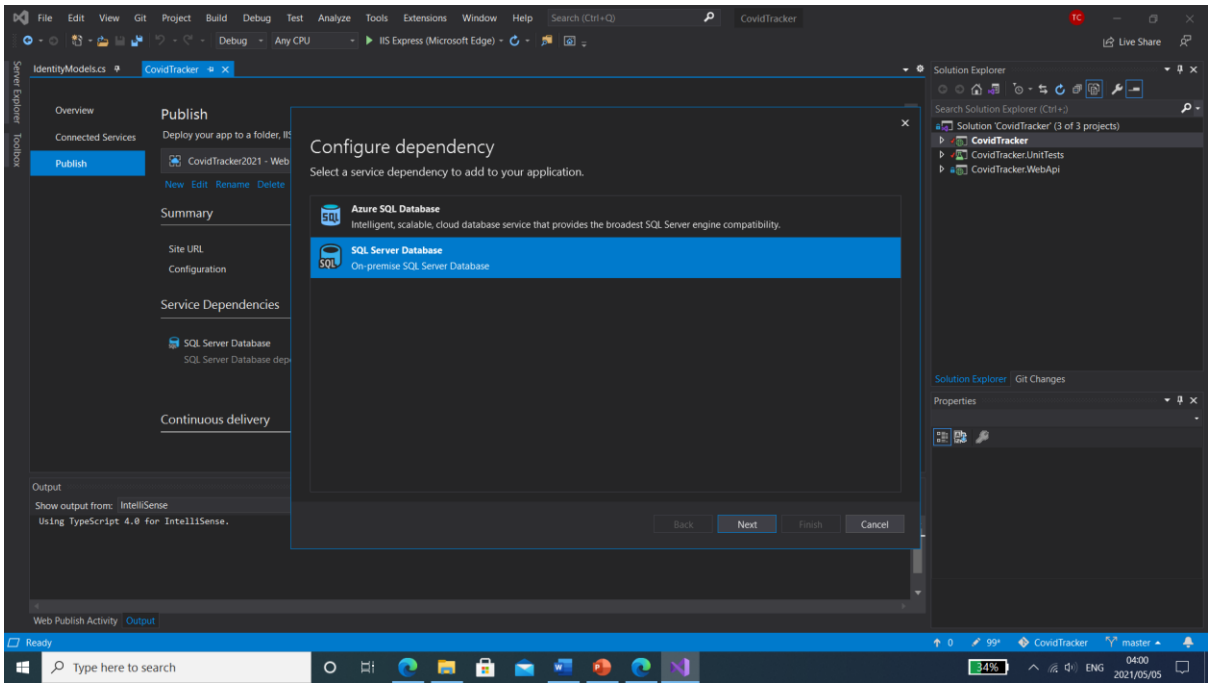


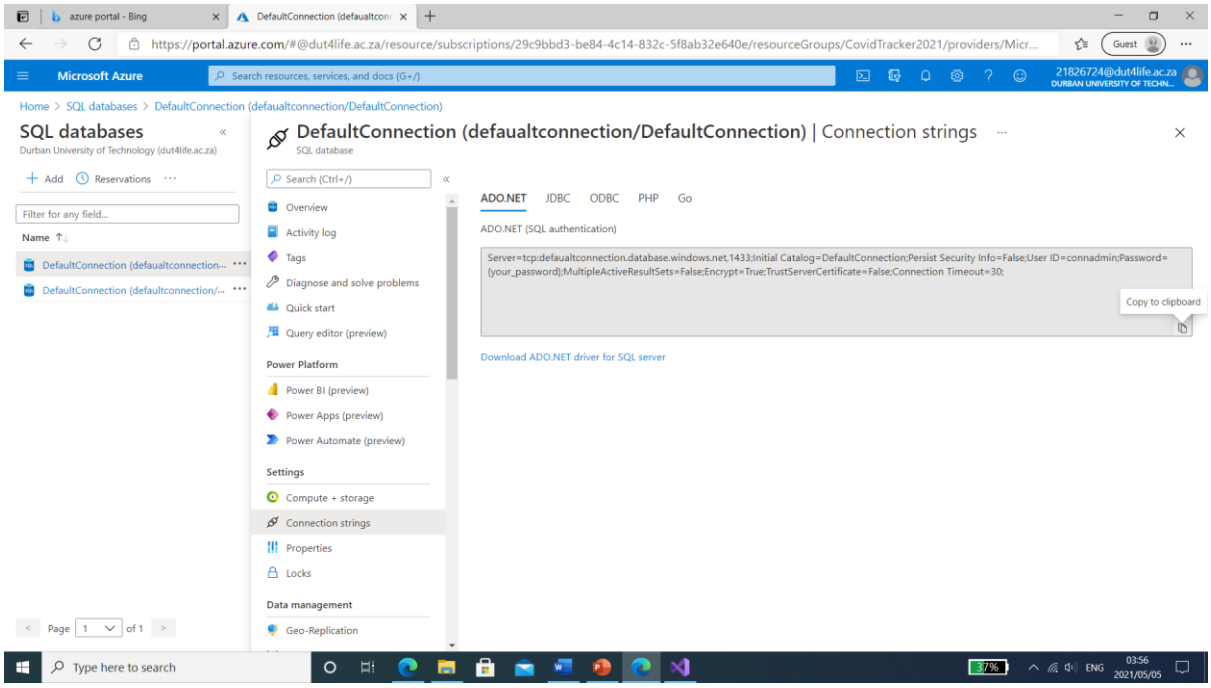
Step 13: Import Profile from your downloads.



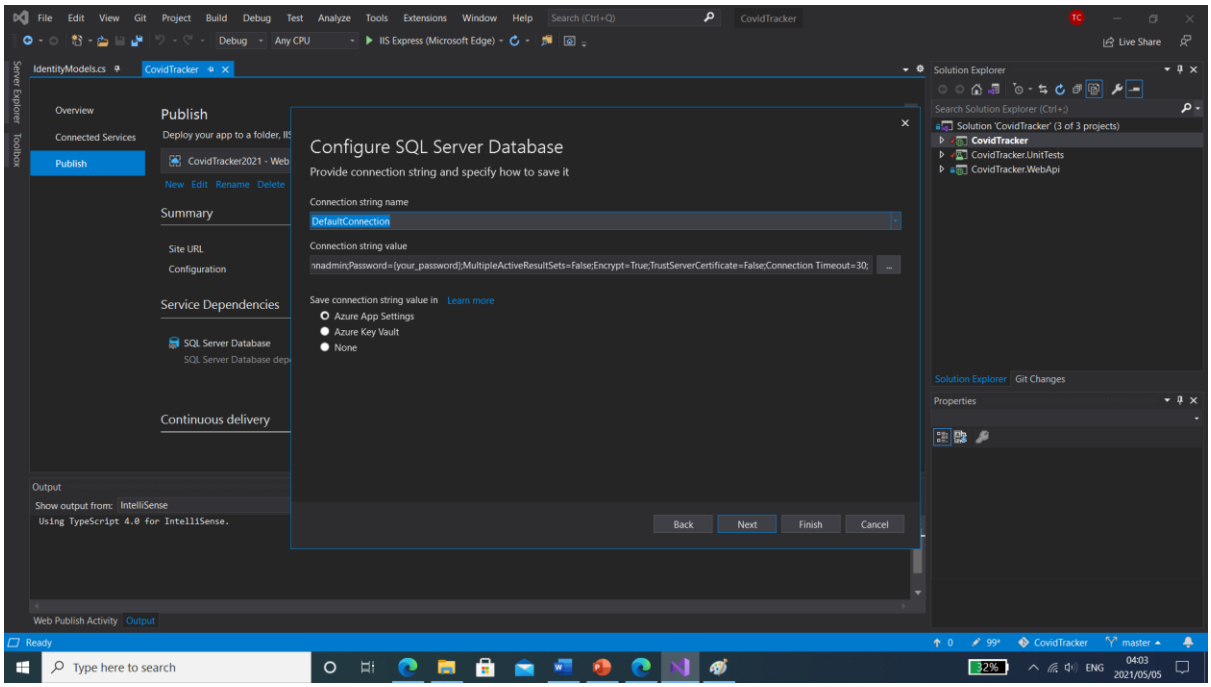


Step 14: Configure dependency, click SQL server Database and go back to your SQL database on the Azure website to copy your “Connection strings”.

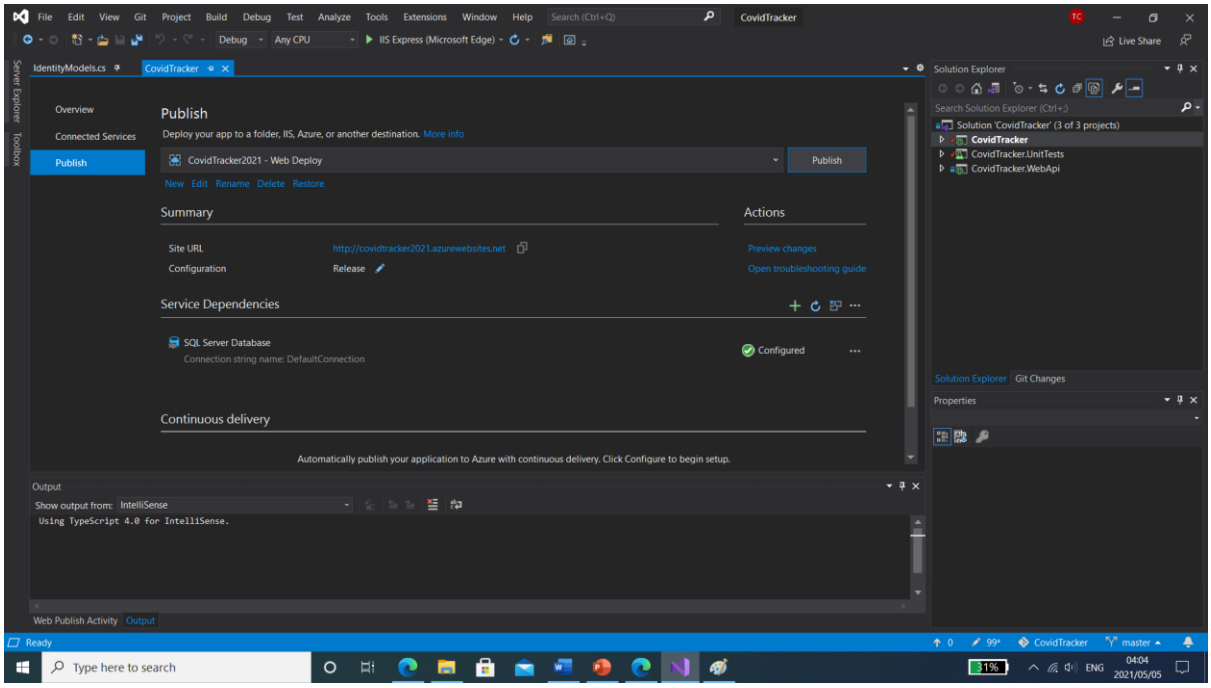




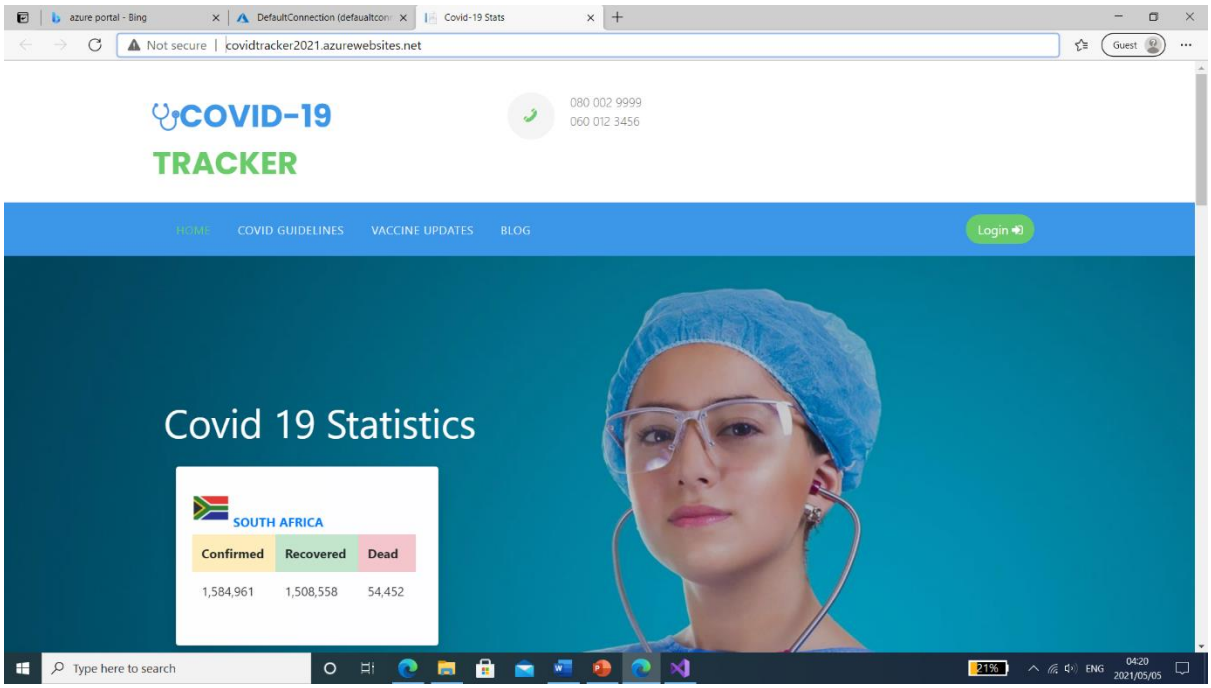
Step 15: Fill the Connection string name and paste in the connection string value that you copied from the Azure Connection string page and click “Finish”.



Step 16: Click “Publish”.



Step 17: Deployed!!!



URL Link: [Covid-19 Stats (covidtracker2021.azurewebsites.net)](covidtracker2021.azurewebsites.net)

Login details:

Username: admin@email.com

Password: admin123

Framework

Below is the Framework we used to build the web app:

- .NET Framework Version 4.7.2

APIs

Below are the APIs we used to plugin to the web app:

- Google Analytics
- Google Map
- Google news
- Covid statistics

Programming languages

Below are the Programming languages we used to build the web app:

- C#
- Structured Query Language
- JavaScript
- HTML

The functionalities

Below are the functionalities we used to build the web app:

- Quiz – Allowing users to take quiz to evaluate their current health. This would give users an idea of what their current conditions are and whether they need to see a doctor.
- Vaccine registration information and a link to help guide the users to the registration website of vaccination.
- Blog – Allowing the users to communicate with each other and share information. This would allow user to acquire information on topics that there are unclear about.
- API – Gets current information and articles regarding South African news on COVID19.

Limitation

Below are the limitations of our web app:

- Internet connection would be required for users to access the website.
- Users would need a device in order to access the website with web browser support.
- User would need to have basic knowledge of the internet and IOT.

References:

HIV, I., 2021. *Coronavirus (COVID-19)*. [online] Avert. Available at: <https://www.avert.org/coronavirus?gclid=Cj0KCQjwgtWDBhDZARIsADEKwgPtrqYPonGH7OInJGsVOEouj0IF6Q2fNJXmXI0cmOpnPafW2u6Bik0aAspHEALw_wcB> [Accessed 13 April 2021].

Who.int. 2021. *Coronavirus disease (COVID-19) – World Health Organization*. [online] Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019?gclid=Cj0KCQjwgtWDBhDZARIsADEKwgO-n8VMANmZ3xyeqc2Cjgm3xvyGRGW1hjbFf_52J29IUmGWl3QVS-kaApWHEALw_wcB> [Accessed 13 April 2021].

Worldometers.info. 2021. *South Africa Coronavirus: 1,559,113 Cases and 53,356 Deaths - Worldometer*. [online] Available at: <https://www.worldometers.info/coronavirus/country/south-africa/> [Accessed 13 April 2021].