

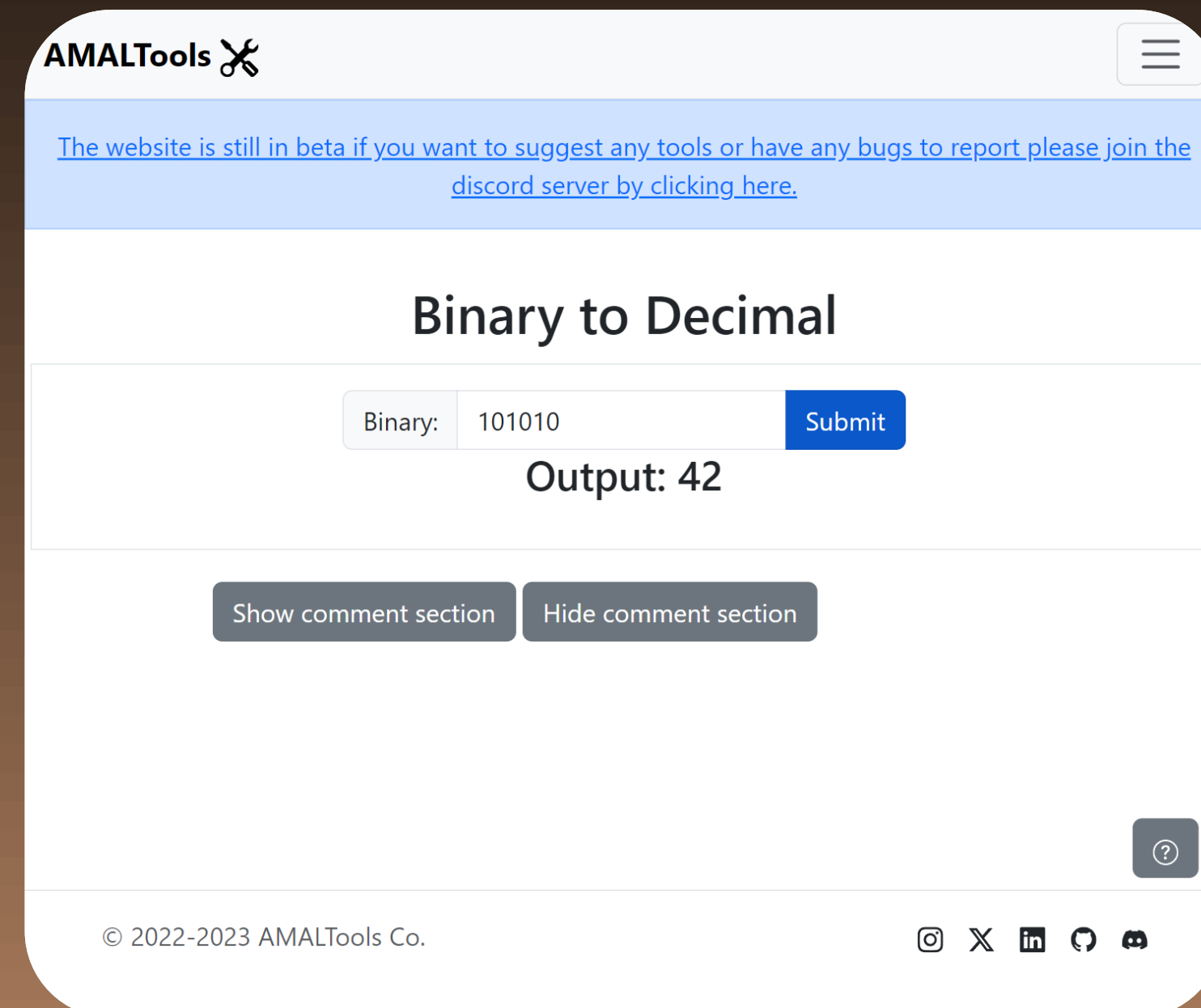
Programming, Designing, and Testing an Effective and Useful Web Application for Any User on the Internet

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Aim of the project

The aim of this project was severalfold, my goals were to:

- Learn how web technologies work
- Develop and host a fully functional web app
- Implement CI/CD, Kaizen, constantly looking for feedback and improving the web app
- Provide a useful and effective service for any user on the internet



Test Timeline

Beta test July - August

Through social media I was able to message over 200 individuals in June, inviting them to take part in the beta test, and with lots of fanfare and anticipation I emailed the over 60 individuals who had signed up. After several weeks, and many bug fixes, I noticed that only around 20 had visited the site and only 10 more than once. This was quite disappointing, the 10 who did participate however helped me fix many issues and many of them even made suggestions. The website was then made inaccessible, so that I could work on it some more.

Closed Testing September 13th - October 26th

Only a select few individuals were given access, all of whom I knew personally, a lot of progress has been made will be released.

The AMALTools beta test has begun

RELOAD THE PAGE (if that doesnt work im probably not at home)

Sign up for the beta test by filling in this form <https://forms.gle/HTWnzmGakSMoA>



Web Stack

A web stack is the collection of software used for web development.

The web stack I used was:

Django

Nginx

PostgreSQL

Linux (Ubuntu)

Other software's I also used included:

HTML, CSS, JavaScript, Bootstrap, python, CodeMirror, certbot and Gunicorn



Server Side

Server (Linux-Ubuntu 22.04 x64)
IP: 78.141.242.65
RAM: 1024 MB (1GB)

Web Server (NGINX)

WSGI HTTP Server (Gunicorn)

Django Web Framework

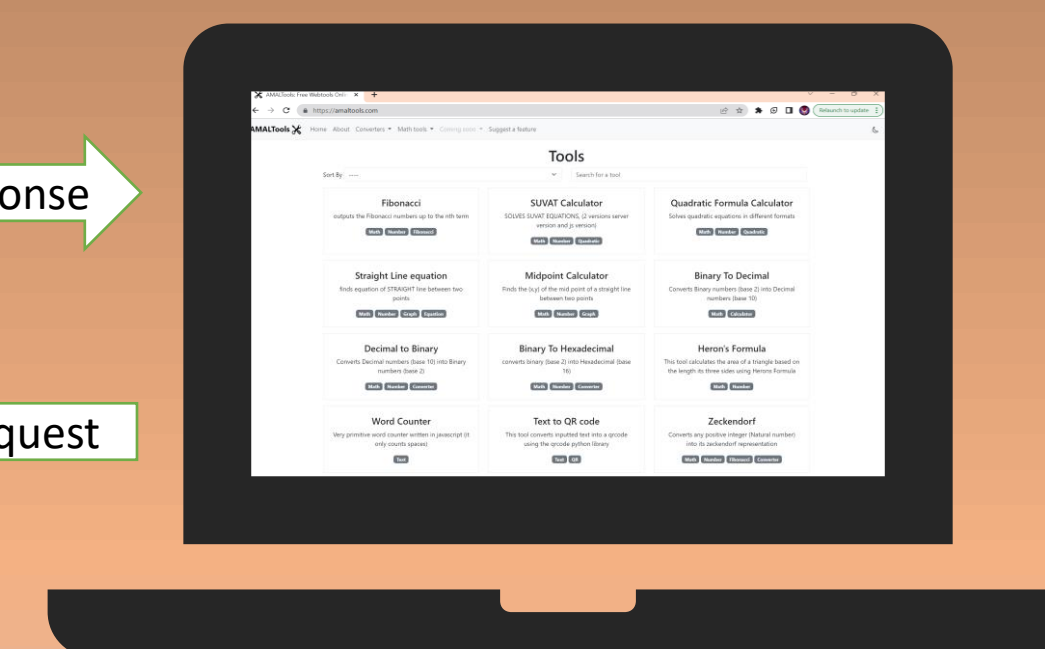
Model View Template

Database
PostgreSQL RDMS

Client Side

HTTP response

HTTP request

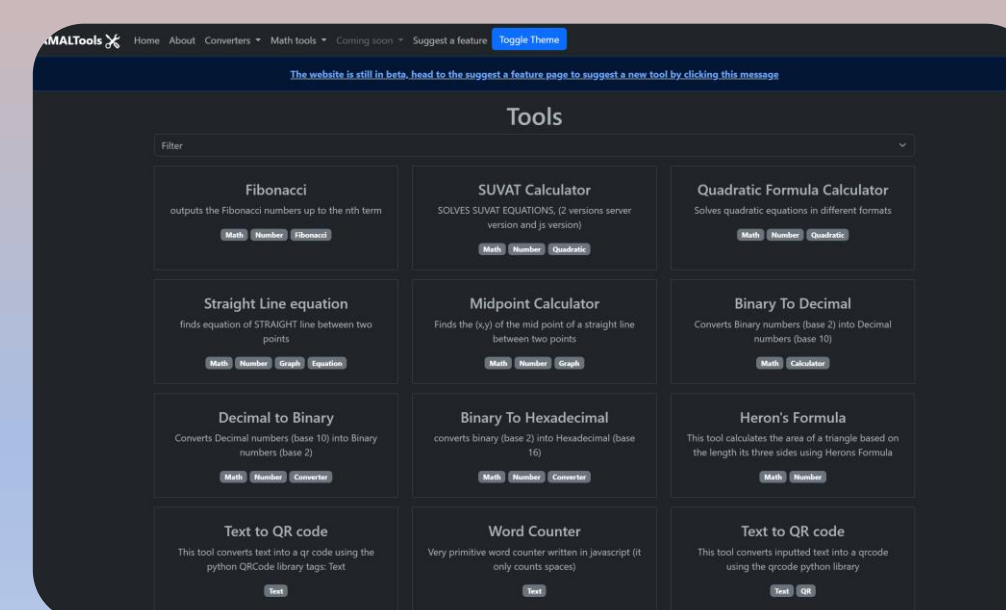


What is your plan for the website after you have finished EPQ?

While the website was quite rewarding in terms of what I learnt and what I have created, I will unfortunately have to stop working on this project as there aren't enough users to justify the costs and time of maintaining it. The main issue I had besides all the bugs was user adoption, many people found it more convenient to search on google for a tool, rather than to save time and use amaltools.com. Another issue was the lack of tools options, despite asking a lot of users for a tool they would like to see, I got next to no responses. The idea for most tools were mine. If it is possible to turn this around and the users start to pick up, then I would be quite happy to continue running the site.

Setting up the Web Server

To make the website accessible to users, I had to have it hosted somewhere, and after lots of research, I eventually settled on a service called Vultr that was recommended by a friend. After many failed attempts, burning up quite a bit of money, I finally found a guide by digital ocean which helped me learn the basics on how to launch a webserver that suited my needs. To make my website secure, I acquired a certificate from let's encrypt and used certbot to set it up. The final part I setup was the PostgreSQL database.

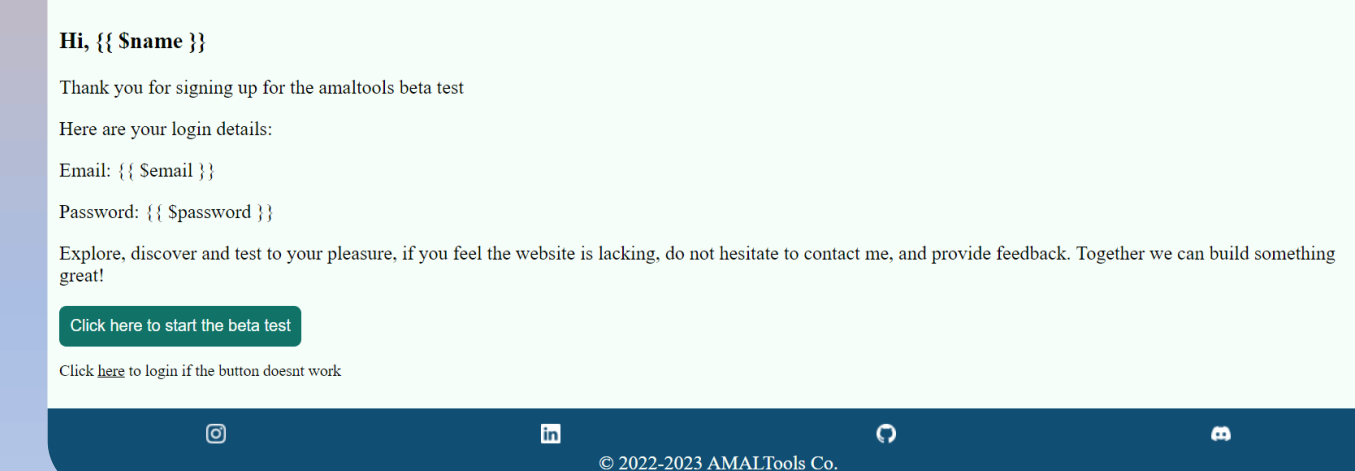


First dark theme

Why should you do an EPQ like this?

Over 300 hours has been spent working on this project with my activity log alone having over 13,000 words! So, some of you may be asking, what was the point? Well, the main one for me was doing something I was interested in with the bonus of getting a grade for it! Alongside this, I also learnt a lot of things including skills needed in industry. And lets not forget that I launched an entire website!! Who doesn't want their own website??

AMALTools



The email template for the beta test

For any updates or questions, email or contact me on:
X - @amaltools
or
Instagram - @amaltools

EPQ 2022-2023



References

Digital Ocean - <https://www.digitalocean.com/community/tutorials/how-to-set-up-django-with-postgres-nginx-and-gunicorn-on-ubuntu-22-04>
Django - <https://docs.djangoproject.com/en/4.2/>
Bootstrap v5.3 - <https://getbootstrap.com/docs/5.3/getting-started/introduction/>
Python - <https://www.python.org/>
PostgreSQL - <https://www.postgresql.org/>

certbot - <https://certbot.eff.org/>
Vultr - <https://www.vultr.com/>
CodeMirror - <https://codemirror.net/>
Nginx - <https://www.nginx.com/>
Amaltools - amaltools.com