



Mahesh [Follow](#)

Retired: But trying to un-retire by training to become a coder for non-profits
Dec 2, 2016 · 9 min read

My 411 days' Journey to FCC Front End Certification—10 days after I turned 74.



Scientific computer design published in Wireless Word (1979)

When Did I get the Bug?

In 1979, a design for a scientific computer appeared in UK [technical journal](#).

It used a one year old, 8bit, Z80 processor—a real change from mini computers. It also used another floating point mathematical processor to do the sums.

So a real dual processor kit.

It had an amazing 3Kb of EPROM and 5Kb of RAM (using 40 chips). Sending instructions to the processor had to be in raw machine code.

As an electronics engineer, building the kit was not a problem. Getting it to do my bidding was something else.

I just about managed to write a small routine that put some stuff on the screen. Sort of a notepad. 1Kb of EPROM had the language, BURP (Basic Using Reverse Polish).

About Me

I have just crossed my 74th threshold:
10 days before I completed my Front End Development.

I live in Croydon, near London, UK.



My retirement from the broadcast industry

After spending 30 years as an electronic engineer in broadcast industry, I ran a video production company for 13 years.



Southwark Cathedral London (2010)

My twin boys are both in IT industry.

Twin-1 is a full stack developer.

Twin-2 ran his own company for few years and employed a few developers but now he works in project management and customer relations.

Down Memory Lane:

Early 1980's saw launches of various Z80 based computing devices. I think Tandy TRS80 was the first one. About the same time Commodore launched Pet but was very pricey.



Video Genie System

About a year later, a Hongkong based company launched TRS80 clone, Video Genie. This was much better because it had built in cassette recorder for loading programs written in Basic.

I managed to write a little Basic routine so that my wife could use it as a point-of-sale to record and store transactions.



5.25" external floppy Drive for Video Genie & Raspberry Pi 3

Still, loading routines and writing transactions to cassette tape took looong time.

So when an 5.25" external floppy drive was made available, I had to have one. The floppy disks were single sided, single density with storage capacity of 100Kb, 40 tracks. (this format matured in later years to offer storage of 1.2Mb on double sided, high density disks).

The Video Genie machine had to be opened up, solder various connections to the circuit board and fit an edge connector.

It really became a productive machine when VisiCalc (visible calculator) software was launched by Dan Bricklin, while still a graduate student at Harvard Business School.

Mr Gates had been busy and soon we had IBM compatible clones on the market. One had to go through all the flavours and in early 90's, a full size PC card was available (a snip at £2,000), to enable me to move to computer based editing.



Connor (later to go to Seagate) 4GB matched pair

In mid-90's, large(!!) HDD's became available and I could move to complete nonlinear editing.

4GB was huge increase but for real time play, 8bit word had to be split in 2 x 4 bit words, to be acquired from 2 matched 4GB hard drives, costing £1000 each.

Another £6000 got me the HDD controller (Fast DPR) to pair with the editing card.

Have n't times changed

I should be on the Internet:

Back in 1998, I took an early retirement from my career as broadcasting engineer and set up a video production business. I asked twin-2 whether he could help me set up a web site.

A web development software from Macromedia was set up on my windows95 PC and I was shown how to create pages and link them.

All went reasonably smoothly and I published my professional website. I was really pleased with the result and thought it was the bee's-knees.

I look at it now and think, Yuk!! Did we do that?

As I got adventurous, I kept asking the twins about various changes we could make.

So on my next birthday, I was presented with [Teach Yourself HTML 4 In a Week](#). Unfortunately, the book's claim did not work for me and I did not get past *Day 1*.

Video Editing Software:

In my upgraded [editing software](#), there was a facility to perform certain tasks using scripting. I asked twin-1 whether that was possible and could he help.

On his next visit, I was handed a floppy disk with C++ manual and said this might help. I printed it out, as one did in those days.

There were lots of pages.

I must admit, I never got past page 1.

Preparing For My Retirement:

As I had more time on my hands, about 5 years ago, I decided to start and host a Family Genealogy site with an off-the-shelf [software](#). The twins helped to customize the home page and get it published.

It was not exactly what I wanted. There was [plug-in for Wordpress](#). This published the genealogy pages in Wordpress wrapper. Twin-1 helped in getting the whole thing set up. Twin-2 redesigned my [Wordpress home page](#).

In conversation, Twin-1 mentioned that one could write an API (new word for me) to talk to genealogy database and one could have independent Wordpress forms.

First Foray in to PHP world:

So, Twin-1 started bashing the keyboard and had a skeleton API running in a short time.

“You need to write user stories, Dad, before I can do forms for you”.

“What is a User Story”, I asked.

I was given a link to read up.

Actual [Wordpress plug-in](#) took couple years to complete with Twin-1 going hot and cold with this project, longest time taken was getting the user submitted data in to DB.

This was my introduction to PHP. I spent time looking at his code, cutting-n-pasting to create populate forms.

How Did Free Code Camp happen?

It was last day in September, last year and I was visiting Twin-2. I mentioned that the Wordpress Plug-in was now done.

I mentioned that our plug-in was now stable but plug-in that rendered genealogy pages in Wordpress was a bit erratic and not supported. It would be nice if One could re-write it. Perhaps if I learnt PHP, I could have a go.

“There’s a course on the net by Free code camp. See if it’s appropriate for you”

So, I had a look, liked it and signed up, on the day.

Starting Free Code Camp Journey:

Starting was quite painless.

I did have to look up syntax for every line code, including HTML comments line. Still, 17 days to get to end of Object Oriented & Functional Programming was pretty good for me.

Twin-1 suggested that I should only use the MDN site and avoid referring to W3schools or *stackoverflow* site.

In fact, he threatened block those site.

I am glad he did not do that. Although I would look at MDN site first, a quick way to check syntax was to visit w3schools. Stackoverflow was next stop if w3schools did not help.

I enjoyed building the Portfolio page. It was my first HTML page. Lot of stuff was by trial & error. I see there is a lot of redundant code there > I must revisit and do a clean-up job.

Then, things slowed down. For some reason, I had had a problem with *Caesars Cipher* but I managed to get through most of other challenges.

I was About To Give Up:

I got *Random Quote Generator* to behave as it should. All I had to do was to get the quote in to the tweet field and send it.

It did not work properly. I could tweet on first attempt. But had to refresh the page if wanted to tweet the next selection.

So I gave up.

Two months later, twin-1 was visiting. I mentioned that I had not done any work on the course for 2 months as I was stuck.

He looked at the code.

“HTML can not refresh by itself, Dad!! You have to do it.”

“How do I do that?”

“Javascript has to do it”

“But... I am doing it”

“No. Do it again. using `getElementById()`”

So a line at the end to send the new quote did it and it worked.

I still did not understand

how to use `getElementById()`.

how to use functions

how to use callbacks

Ray of Hope:

A month later, I discovered that there was a [FCC community group](#) in London. I debated

whether I should join;

whether they would be too amused to see an old codger like me doing this course.

I should not have worried. There were 4 other students at the meeting. They were very inviting and helpful.

It was the best thing I did. Just talking to like minded people is not only helpful, it gives encouragement and impetus to carry on.

It is really nice to see 20+ coders attending monthly meetings.

Couple of months later, I joined [another group](#) which met every week and it was a whole day affair. This turned out to be my saviour. Little things which I could have spent time correcting, on was spotted with good explanations. All the coders at both the meetups are really friendly and helpful.

Without their help and support, I would not have been able to complete my Front End Certification.

Issues That Got Me Stuck:

1. It took a long time to understand how Javascript & HTML communicated with each other. It may be obvious to most of you but to me, it a long time to understand `getElementById()` was a 2 way process.
2. Neurons in my brain have made connections for serial processing and are rusted in that mode. It is taking a long time to get them to reconnect to process object oriented, multitasking.
But I am getting there.
3. Algorithm solving has been a mixed bag. Some have been reasonable to resolve, using logical thinking and then Googling to find ways of solving. I have spent lot of time just staring at the screen to understand what I am supposed to do.
`question.filter(brain)`
has been the problem.
4. When I started, I had great difficulty understanding function of *functions*. I was really struggling climbing this steep learning curve.
Then I saw an explanation on Free Code Camp Forum:
“Treat functions as lots of closed boxes. Just open them to retrieve contents, as required.”
Obvious but that made a new neuron connection.

My Final Lesson:

Now I knew about treating functions as boxes. So on my last project, Simon Game, I created all the functions I would need.

The game worked—up to a point. After couple clicks, game developed a mind of it's own. I was convinced I was on the right track, so just kept going back, re-coding.

So I asked on the FCC forum:

Gave up and asked my Twin-1.

“Dad!! You are not telling the functions what to do , when done”.

So that excellent analogy of functions as boxes had final bit missing. Most of you, would probably take it as read but for me that was a very important lesson.

Do close the box after retrieving the contents.

Finally:

Starting with Free Code Camp was probably best thing I did. The knowledge and dedication of the teaching staff is outstanding.

The participants, especially coders I see at meet-ups, are friendly and helpful.

I am glad I started this.

I still can not get over the fact That I have got my Front End Certification.

Final recognition of my ability came from the twins, last birthday:

Raspberry Pi 3 with Linux preloaded.

Thanks Boys

If you are thinking about joining,

Go For It