Q1.
Heartbleed is related to crypotgraphy because it was the result of a bug in the openssl library which is used in many clients & servers to secure connections with TLS. This vunerability caused by a buffer overflow lead to both servers & clients leaking information which could then be used to reconstruct private keys allowing someone to impersonate or otherwise passively listen to traffic in future sessions. Shellshock was not a cryptography bug, it was a bug in a popular terminal called BASH which ships with most linux & mac devices. This bug only affected the client software and was not a bug in the implementation of cryptographic protocols. The bug allowed access to systems without authorization and gave an attacker complete control of the machine (Remote Code Execution), this was more severe than heartbleed.

It's impossible to mitigate bugs in security software however preventative measures can be used to mitigate the effects when they are discovered such as.

- Regularly updating software(Especially security software)
- Keeping up to date with security flaws with security mailing lists
- Using least privilege principles to ensure software & users strictly only have the permissions & access they require to perform their functions.
- Ensuring all software in use is properly audited and is regularly maintained.

Open source software is more secure than closed source software in most scenarios, open source allows all the users to point out bugs with software and fix them. This also allows bad actors to view the code and find exploits however this is outweighed by the benefits of allowing the community to fix bugs. It also means any attack that is exploited in the wild is generally quickly reported and fixed.
Restricting access to the codebase through closed source is really just a form of security by obscurity. You are hoping because the bad actors can't see the code, they cannot exploit it.
However there are many methods for finding bugs without needing to look at the code, such as fuzzers etc. More importantly when a bad actor does find a bug, it's generally much harder to find, fix and distribute an update out to users.

Q2.
I chose to install the software on my Gaming PC as it has a GTX 1070 graphics card which can be used to increase my hashrate.

The first step involved picking a wallet, I chose the electrum software wallet as I did not want to have to download the whole blockchain ledger and it provides far more convenience if I want to transfer coins than a full wallet. This is a less secure option however.

To mine efficiently and actually make some profit, I joined a mining pool to collaborate with thousands of other miners. I chose to join slushpool one of the original mining pools.
Following this I needed to install an actual miner to to the computation required, I choise to use nicehash miner due to it's simplicity and the fact it was capable of fully using my GTX1070 graphics card. I then set the usage, to 75% and left it for a few days. During this time I monitored the price with the coinbase app.

Overall profit was poor despite my powerful hardware, I earned very little. Certainly not enough to cover the actual cost of electricity used to power the machine.
The same can be said of mining on mobile devices, despite their ubiquity they simply can't compete with the power offered by traditional PC's. Bitcoin and most other cryptocurrencies favour large pools of machines as opposed to individual miners.
To produce an actual profit, multiple machines are needed which locks out most individuals.

Other similar cryptocurrencies include
Ethereum
Ripple
Tether
Chainlink
AltCoin
DogeCoin
Banana Coin

Bitcoin usage in Ireland is extremely limited, GSM solutions provide a bitcoin atm but that's about it. Almost all usage within Ireland is online via international providers, that accept bitcoin payments. Platforms such as steam, hosting providers, revolut and others that accept bitcoin.

Legality: Bitcoins legal status is extremely unclear at the moment, some countries ignore it, some treat bitcoin similar to shares and other capital investments other ban it.
Legality completely depends on what country you are in and in most cases it’s extremely murky. It’s likely to stay this way for the next few years while governments catch up and start to regulate.