Electronic Voting

And why it's a horrible idea

And how I try to fix it

And fail miserably
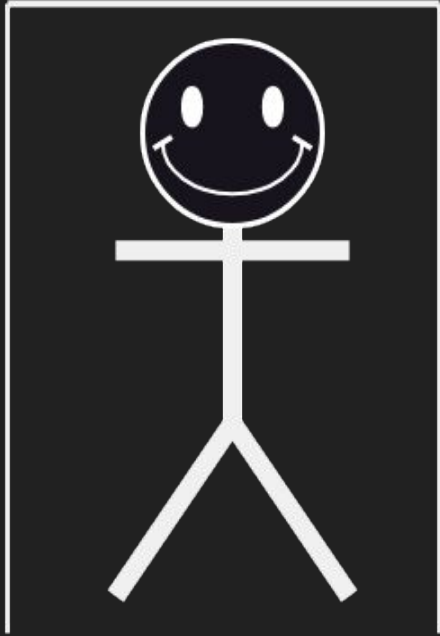
A Computer

I didn't find a half decent image

1. Anonymity

Completely real person

2. Trust, or the lack of it

Essentially, you never trust one person / thing with the results

Which you do, with a any voting 'machine'

Soft-ware

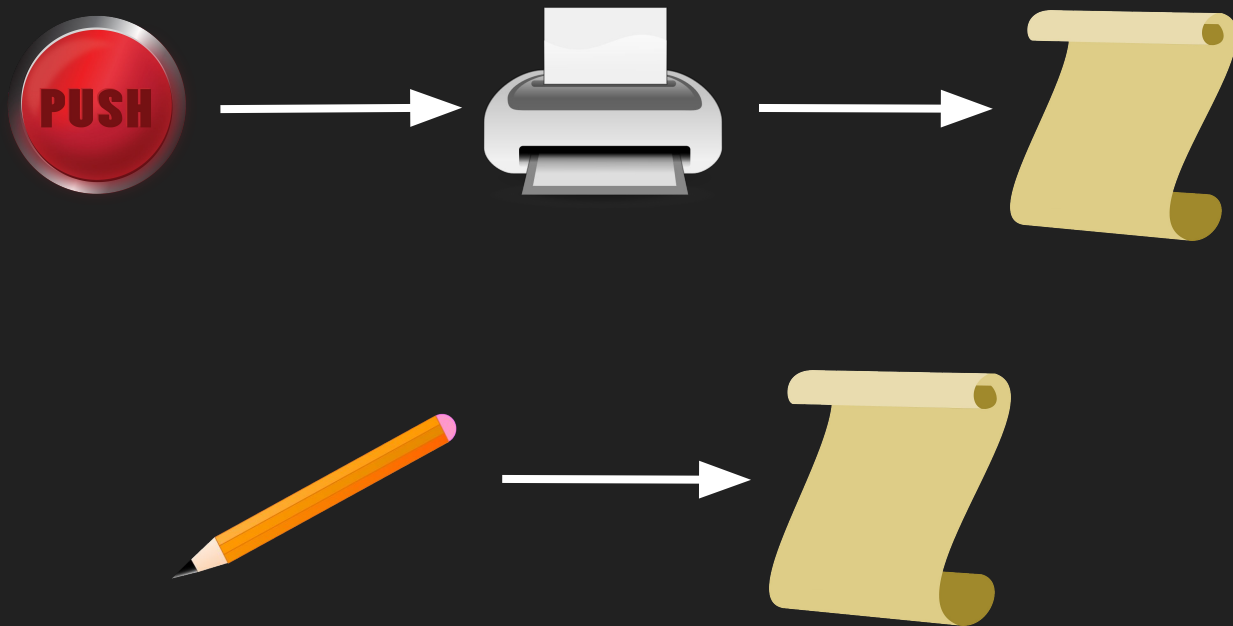How due to ensure that a software
<u>hasn't been tampered with</u>

```
code  ─────────────▶  c13367945d5d4c91
                      047b3b50234aa7ab
```
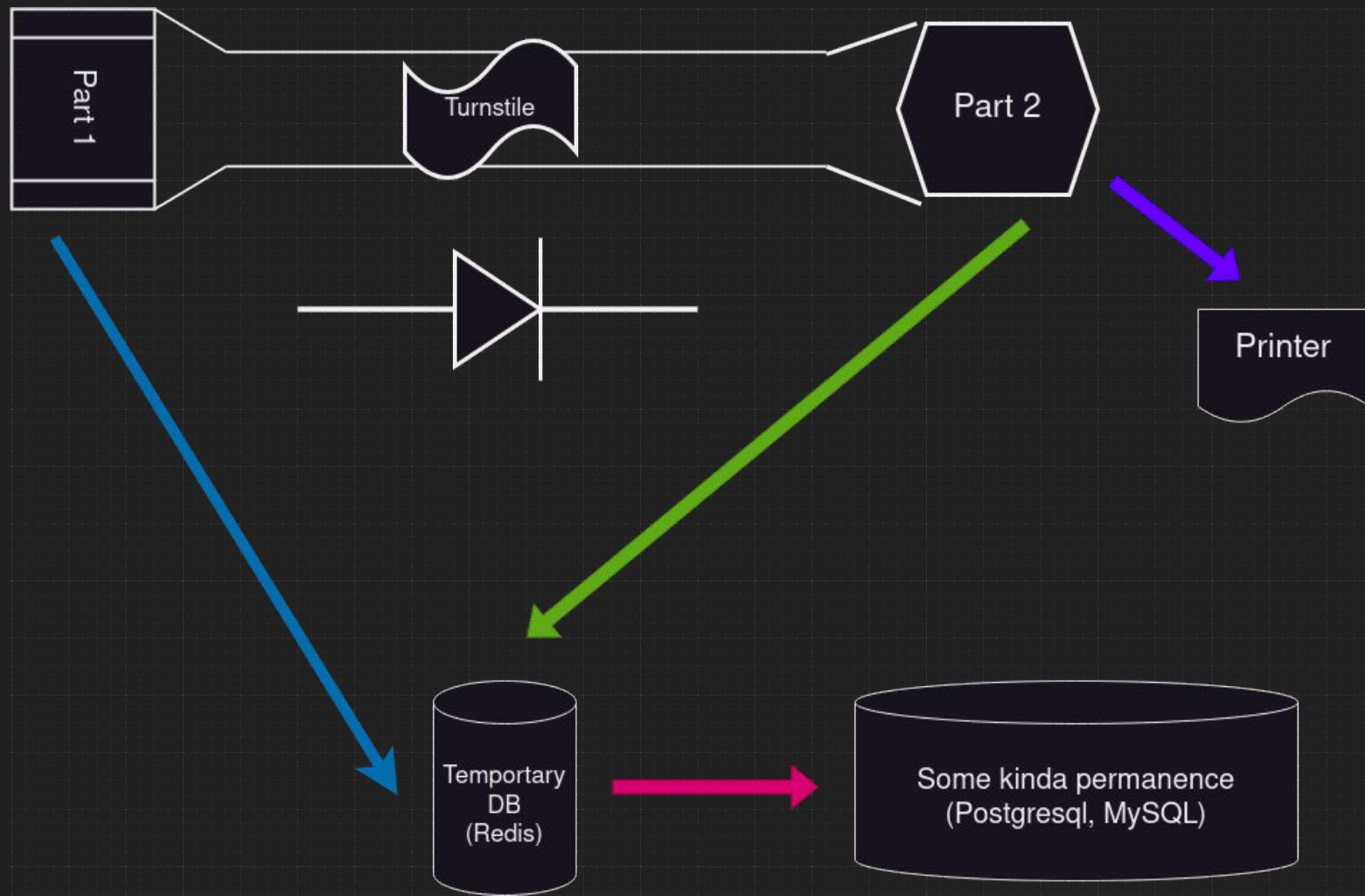
*Its md5

Redundancy Maybe?

1. Anonymity

2. Trust

3. Fixing double votes

4. Ensure that Tallying / Count isn't biased

5. Some redundancy

Left editor (vim):

File   Edit   View   Bookmarks   Plugins   Settings   Help

New Tab   Split View

```python
import redis

class RedisInstance:

    def __init__(self):
        self.instance = redis.Redis('localhost', 6379)

    def setv(self, key, value) -> bool:
        self.instance.set(key, value)
        return True

    def getv(self, key) -> str:
        return self.instance.get(key)

    def setv_init(self, pairs: dict):
        """
        Set Initial key value pairs
        preferably during initialisation
        """
        for key in pairs:
            self.setv(key, pairs[key])
```

"redis_utils.py" 26L, 514B

Right editor:

Code   Blame   102 lines (80 loc) · 2.99 KB

```python
11      ]
12
13      app.add_middleware(
14          CORSMiddleware,
15          allow_origins=origins,
16          allow_credentials=True,
17          allow_methods=["*"],
18          allow_headers=["*"],
19      )
20
21      @app.on_event("startup")
22      async def startup():
23          print('app starting up')
24          await database_manager.database.connect()
25
26
27      @app.on_event("shutdown")
28      async def shutdown():
29          print('app shutting down')
30          await database_manager.database.disconnect()
31
32
33      @app.post('/create-poll/', status_code=status.HTTP_201_CREATED)
34      async def create_poll(poll_object: models.Poll):
35          result_object = {}
36          for option in poll_object.poll_options:
37              result_object[option] = 0
38          record_id = await database_manager.create_poll(poll_object, result_object)
39          return {"id": record_id, **poll_object.dict()}
40
41
```

And then I realized how dumb I am

1. Proxy Vote
2. A physical version of the man-in-the middle attack
3. Hardware & Software Failures
4. People failing to learn system / Accessibility
5. As listed earlier, anonymity, security, privacy & transparency
6. Costs, both CapEx and OpEx
7. The insane logistics of transporting whole computers instead of ballot boxes (if you thought the internet / blockchain / ipfs / cool-new-tech-you-heard-about-yesterday was a solution then you should really not be building voting systems)
8. LITERAL COSMIC RAYS (see the Maria Vindevogel incident)
9. Its as easy to change one vote as it is to change 100, 100000, or other larger numbers you should use scientific notation for
10. People being People

Computers are loyal
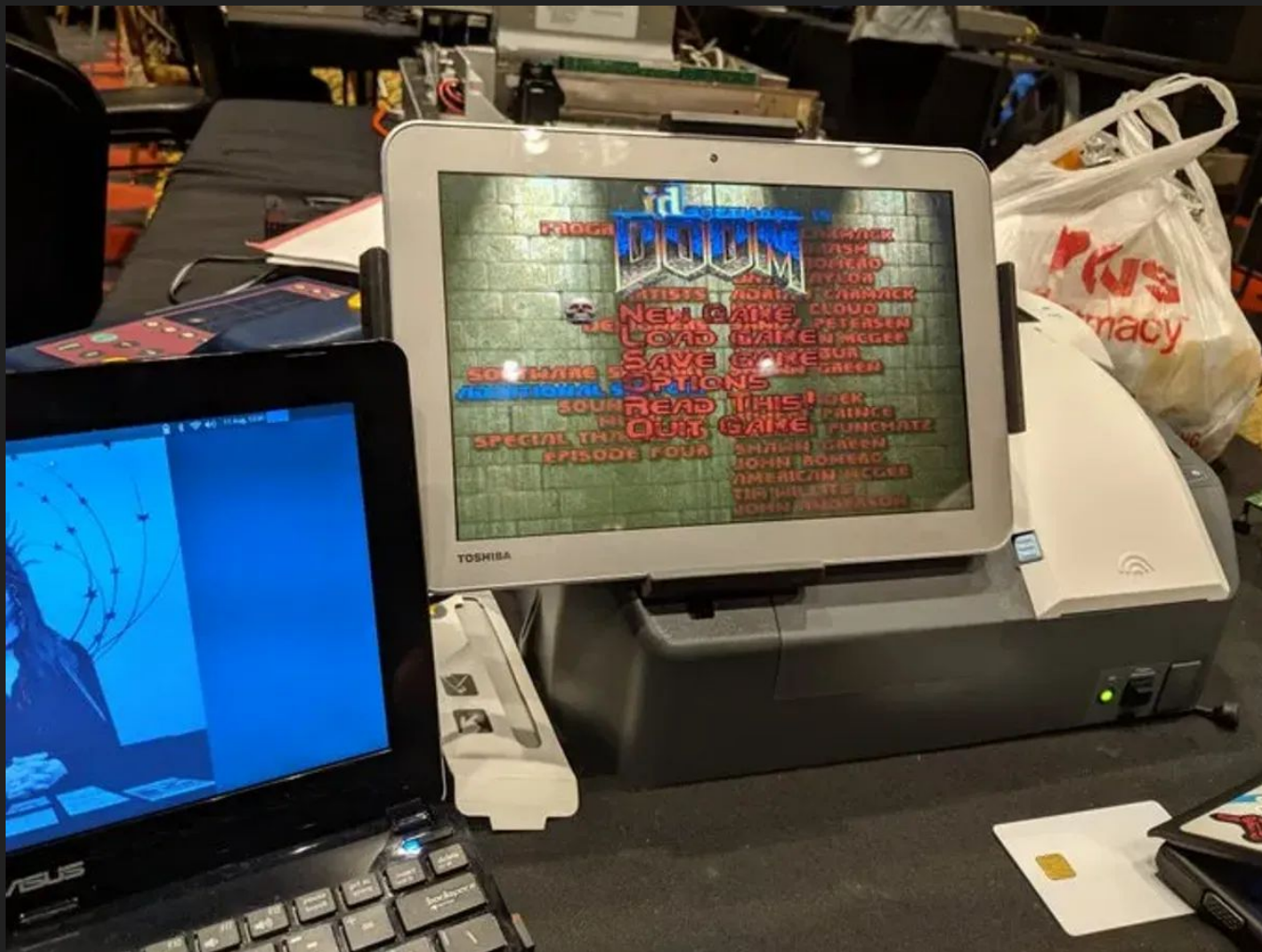
Doom running on an EVM

Defcon 2019

Thanks