# Project Kickoff Meeting🚀            19th March 2022

**Attendees**
- Aidan, Ian

**Background**
- We're creating a web-based application based on the NASA space station context.
- **Design:** Design docs deadline - 18th April
- **Implementation:** The code must be finished by: week 23 May
- **Demo:** The demo of the product and codebase is on: 26 May

**Scope**
- Restful API to speak with the database
- Authentication details  WAD Domain Controller OR local hashing and salting (research the pros and cons of each system)
- Producer/Consumer for ?
- MFA  —-  pyotp library with most secure encoding sha_512 (reference why sha_512 is secure)
- Testing  —- pytest for unit tests automated with github actions
- Diagrams: Activity diagram, Class Diagram, Sequence Diagram

**Roles**
- Ian - Developer and Content Writer
- Aidan - Developer and Content Writer

**Questions**
Potential to use Windows Active Directory Domain Controller
   🟡 **Will this force us to use one OS?** No, you can use either.
   🟡 **Is it more secure than using a DB with hashing and salting?** Check out pros and cons.

**Notepad**
- **Data storage: PostGres DB** – has option to store JSON data as well as structured table data
- **MFA:** pyopt – with sha_512 encoding (get a reference!)
- **Fault Tolerance** - how to deal with failed server, loss of communication
- **Testing** — pytest (brief research on security of pytest vs unittest)
- **REST Api** to speak with database (implemented in flask)
- **Microservices**: Ground Control, Space Control (each with their own db?)
- **Applications**: Data Monitor
   🟡 login (can we use public API for list of authorised users?),

- 🟡 dashboard to monitor data,
- **Applications**: System Controller
  - 🟡 login,
  - 🟡 IP logging and filtering,
  - 🟡 security against DoS attacks,
  - 🟡 ability to communicate with space station
    - Increase oxygen,
    - decrease oxygen,
    - increase temp,
    - decrease temp,
    - ability to disable space station controls.

**Actions**
- ERD for data structure (table for each sensor?)
- Set up database
- Decide on API endpoints

**Next Meeting**
Tuesday 6.30pm: Agenda Database design – database endpoints