Griffith UNIVERSITY

Griffith School of Engineering

PROFESSIONAL PRACTICE
CATEGORY A, B & C ACTIVITY LOG SHEET

1. PERSONAL DETAILS

Griffith identification Number						
5	1	3	8	8	7	7

Family Name: Barber

Other Names: Jessy

2. PROFESSIONAL PRACTICE ACTIVITY

CATEGORY (See Note 1): **A**

Days (See Notes 2 & 3): **5**

Week Beginning	**21 / 11 / 22**	**Week Ending**	**25 / 11 / 22**

Supervisor Name: Alex Forward

Contact Ph: +61755492370

Organisation Name: Gilmour Space Technologies

Email: alex.forward@gspace.com

Organisation Address: 5 Millennium Circuit, Helensvale

3. ACTIVITY DESCRIPTION & REFLECTION

Description of Activities Undertaken: (Approximately 50 words)
I researched the theory behind a CAN bus in terms of its physical layout and data transmission. I started planning my project which involved designing software applications and hardware to sniff for battery management system (BMS) data packets being transmitted over a CAN bus network. The packets needed to be decoded into relevant information from the BMSs such as module voltage, cell voltage and cell temperature. The system had to be designed as a read only device and support a data transmission rate of up to 1 Mbps.

Discuss the Engineering Application Abilities Developed: (Approximately 50 words) (See Note 5)
Whilst planning the initial design of my project, I developed my research abilities and knowledge development by studying the inner logic of CAN bus data transmission. I learned about packets, endianness, hexadecimal addressing and protocols for decoding data from CAN frames. I have also developed my skills in C++ within the CLion IDE by learning about Cmake files to organise my project. Overall, I feel that I have extended my knowledge in binary encoding / decoding, packet transmission and programming.

Discuss the Professional and Personal Attributes Developed: (Approximately 50 words) (See Note 5)
Before I started developing the code for my applications, I had to become familiar with the software team's GitLab repository. This required me to learn about Git CLI commands for committing, and about branching commits. I hadn't been involved in a large-scale repo with multiple authors before, so I feel like I have developed my understanding of how companies organise the software they are working on at a large scale.

4. STUDENT SIGNATURE

Student Signature: Jessy Barber

Date: 26/11/22

Notes:
1. See the table provided in the Activity Log Guidelines for the definition of each category of professional practice.
2. For work experience paid on a casual hourly basis, a day of work is taken as 7.25 hours.
3. Only days between Monday and Friday can be counted for research undertaken at Griffith University in Category B Professional Practice, unless prior approval has been granted by the course convenor for 6008ENG.
4. At least one Activity Log Sheet must be provided with each Record Sheet for Professional Practice in categories A, B and C.
5. Refer to the Engineers Australia Stage 1 Competencies.