

ePortfolios: a novel way to assess engineering interns

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What it is...

A new course, launched in 2010, that uses a student's internship experience to help them to further develop their engineering skills and practice.

How it works...

Students, working in industry full-time for a period of 6 months, are assessed for academic credit.

What it contains...

The curriculum, that is the content and learning processes, were defined by internship environment. Internships were offered in areas that matched the aims and content of the ANU Bachelor of Engineering (BE) degree. The main aim of the BE is to prepare students for successful careers as professional engineering managers, designers, analysts, educators and researchers.

What are the learning outcomes?

Students:

- Apply knowledge of engineering in similar and/or new situations
- Assess when new knowledge is required and demonstrate competency in obtaining and applying this knowledge
- Integrate existing and new technical knowledge for industrial application
- Demonstrate relevant Stage 2 Engineers Australia technical competencies
- Discuss the concept of lifelong learning through critical reflection of work experiences and processes

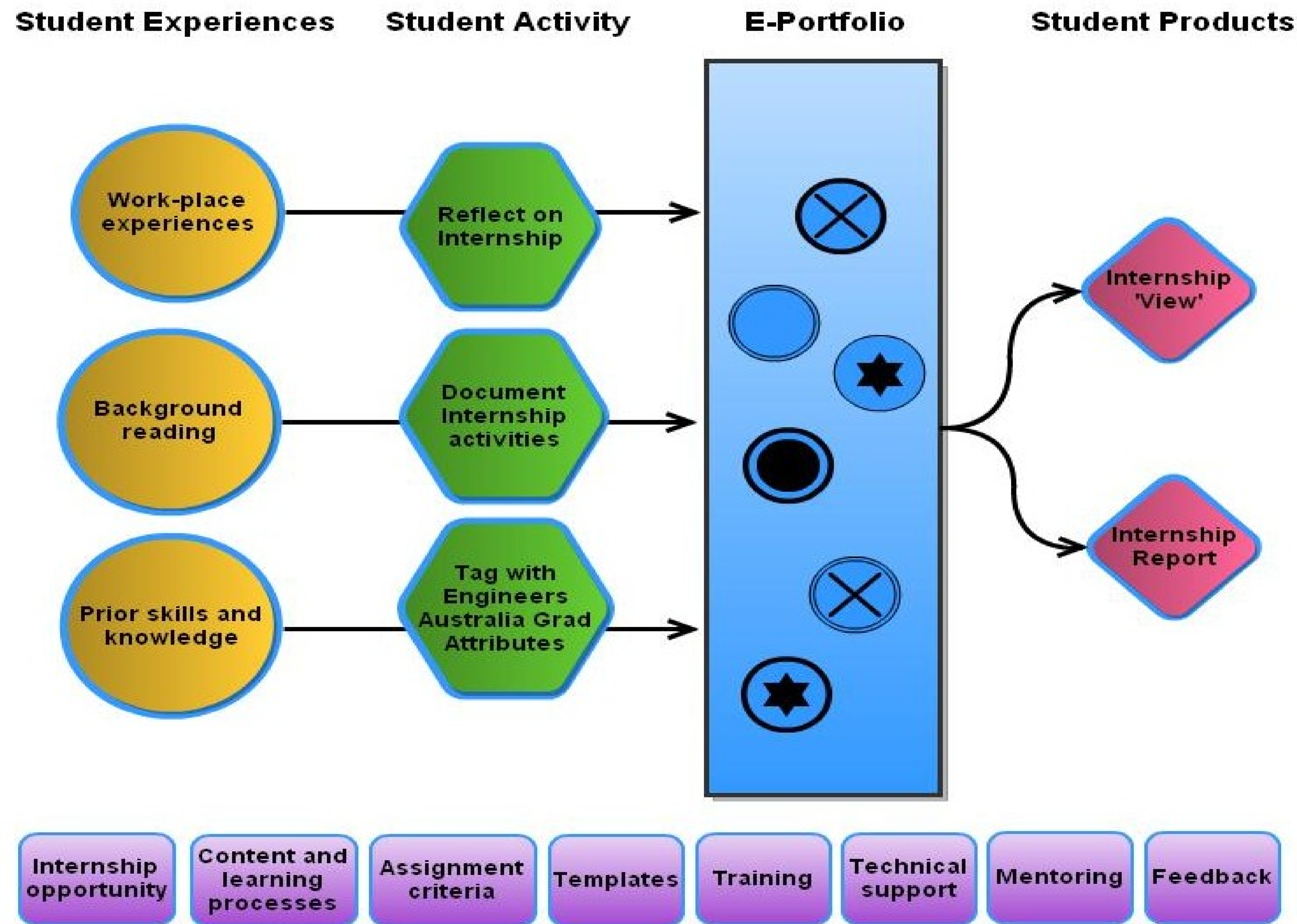


Figure 1: Flowchart demonstrating our use of the ePortfolio

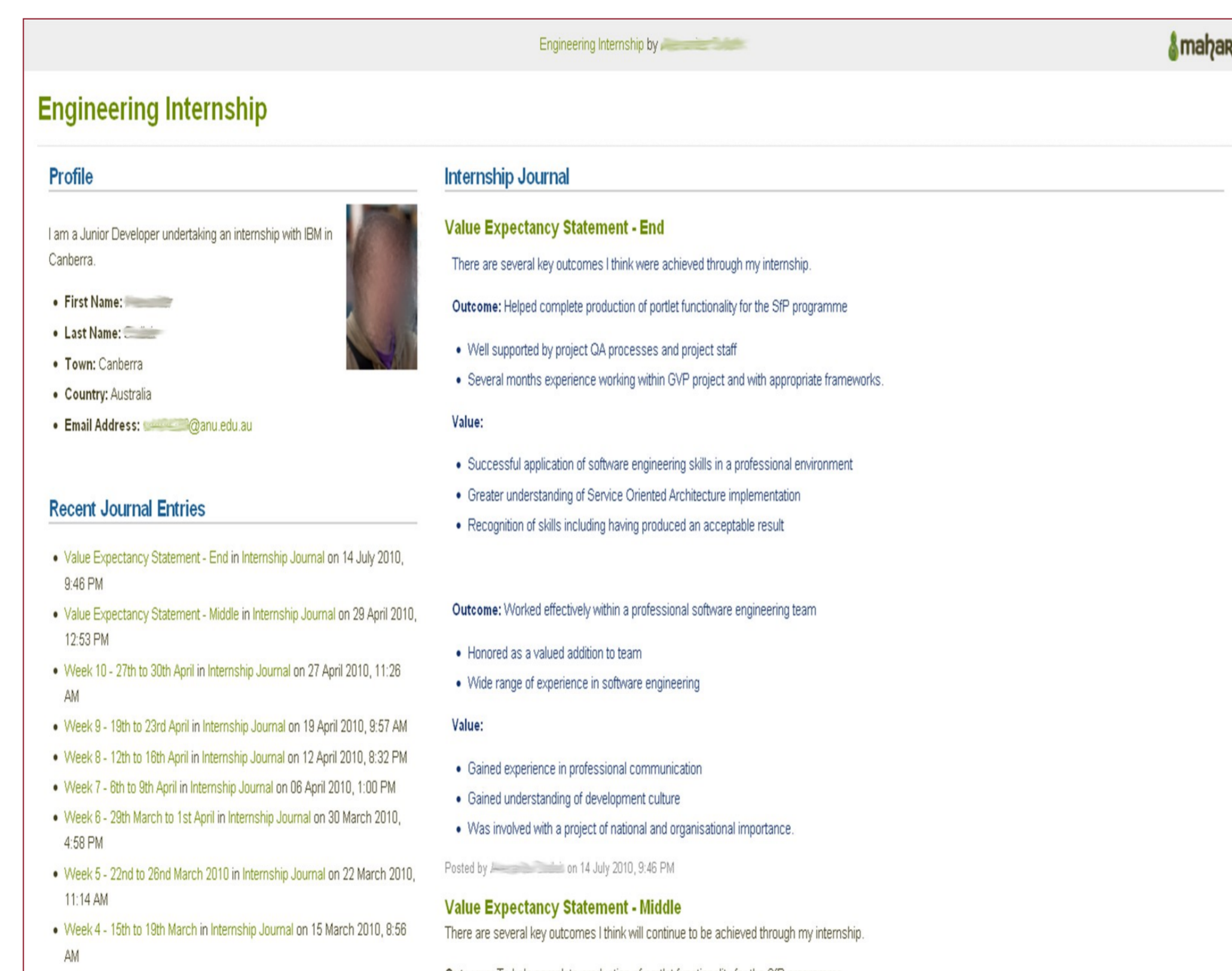


Figure 2: Student work sample

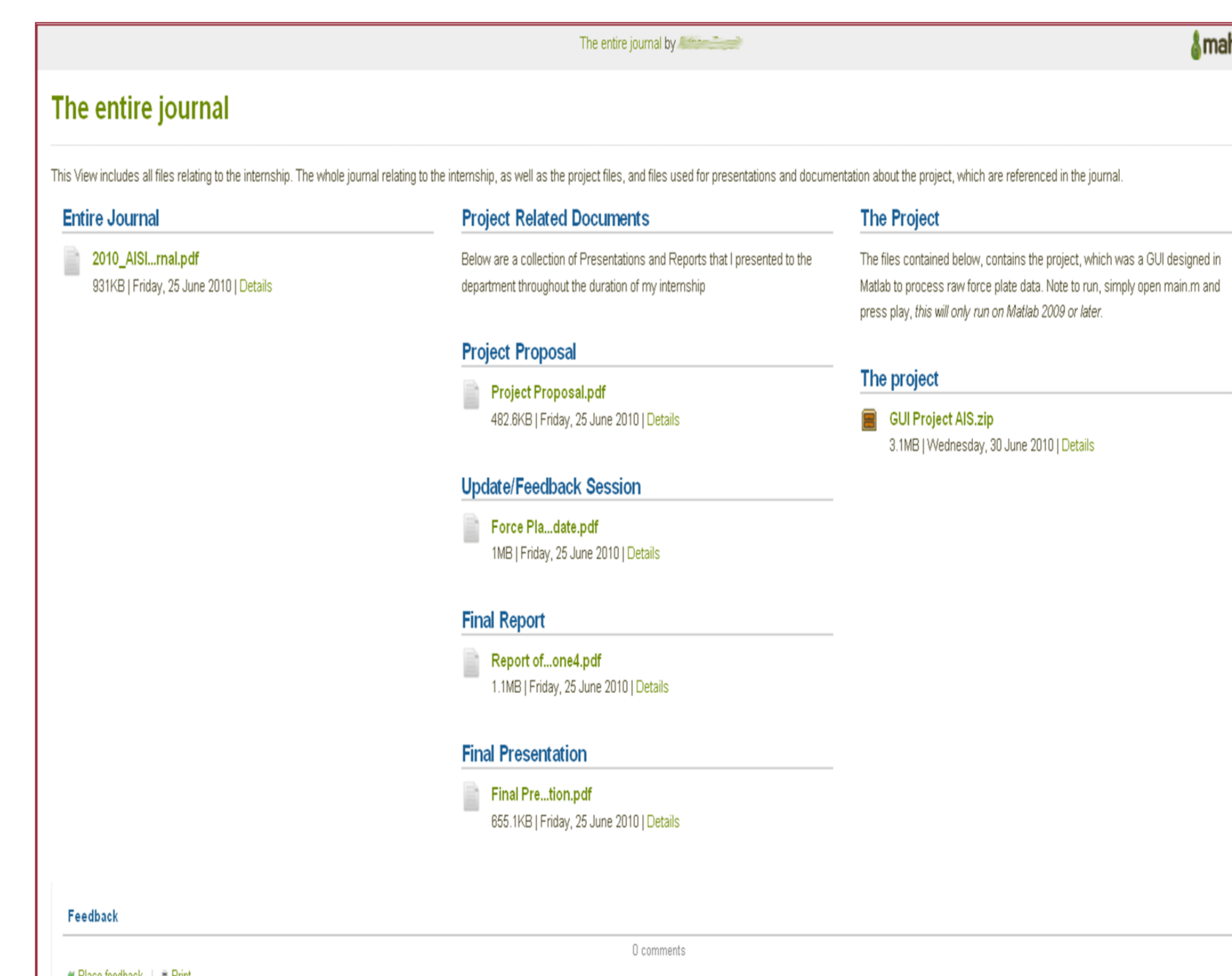


Figure 3: Student work sample

How are the students assessed?

- Four main assessment items that are flexible around:
- work experiences
 - existing and new technical knowledge
 - Engineers Australia competencies (Stage 2)
 - other work-place issues, eg. location, company size and current projects

and two ePortfolio items:

Internship e-Portfolio

Keeping a reflective journal of tasks and experiences including:

- written reflections
- photographs
- diagrams
- videos,
- audio files and any other artefacts
- and three written pieces on the student's values and expectancies of the internship at the beginning, middle and end of their time in the workplace.

Students present their work in a View, which they share with the course convenor and workplace supervisor.

Internship report

A report on the Engineers Australia Stage 2 competencies showing evidence from the student's work or experiences that demonstrate achievement of the competencies.

What did we learn?

- A lot of one-to-one support and resources were required to help students become familiar with the system
- We had to overcome teething issues around submitting work in Mahara
- Response from students was mixed
- Students appreciated the flexibility of accessing work from any location, but found the system limited the presentation of their work

Where to now?

The flexibility of Mahara is a highly desirable trait for our Internship Program and we aim to improve our use of the tool by:

- Fixing limitations with our local installation of Mahara
- Taking advantage of Mahara's flexibility while adding structure with online Moodle assignments
- Varying the weighting of the assessment items
- Mentoring students to develop their writing skills
- Collaborating with ANU Careers Centre to develop online materials for employability skills and employer expectations

Where possible I have tried to talk about the lessons I have learned and observations I have made rather than just recording what I did each day....I believe I was able to complete all my tasks to a high standard but by being aware of potential lessons and important observations by writing the blog I was able to get more out of the tasks than I normally would.

I now hope to use the lessons that I have learned through this internship in my future career to produce better quality outcomes.

-ENGN3200 student

More information

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