Operating system principles

Team ⟨sql injection⟩

Our project is a modernised phonograph, using the *Raspberry Pi*® for subject tracking, digital recording and audio processing.

Learning Objective 1

- Prototyped complex code in Python, then translated to C/C++ for better performance.
- Used static analysers to find code improvements.
- Used "Instruments" for debugging performance and finding memory leaks.
- Ran manual benchmarks to test performance and accuracy.
- Git and GitHub for version control.

Learning Objective 2

- Designed workload to be split across two *Raspberry Pi*®*s*.
- Iteratively improved CPU performance of face detection.
- Incorporated motion sensing to improve power consumption.
- Experimented with process scheduling.

Learning Objective 3

- Carefully designed a 19 page project specification.
- Documented message queue between two *Raspberry Pi*®*s*.
- Wrote a multithreaded solution.
- Experimented with process scheduling.

Learning Objective 4

- Modularised solution into weekly deliverables.
- Arranged deliverables so dependencies were not in sequential weeks.
- Wrote software to simulate hardware responses.
- Cross-skill development.