

## CMPT 433: Project Marking Rubric

Score	Overall	Project Difficulty	Project Quality
A+ = 95-100	Exceptional work; best in class	Very high degree of difficulty using <i>multiple complex</i> elements. Amount of complexity goes beyond what is normally seen with CMPT 433 projects.	Little to no issues with project quality. Features are well implemented, exceptionally polished. Product is virtually ready for real-world use.
A = 90-95	Great work	Higher degree of difficulty than required with <i>multiple</i> (likely <i>complex</i> ) elements integrated into the project.	Few issues with project quality; highly polished. Product is largely ready for real-world use.
A- = 85-90			
B+ = 80-85	Good work; meets expectations	Expected degree of difficulty with <i>some</i> elements integrated into the project. These elements may or may not be complex.	Few issues with project quality; reasonably polished. Product demonstrates promise for real-world use.
B = 75-80			
B- = 70-75			
C+ = 65-70	Some improvement required	Just below the expected degree of difficulty; <i>few or no</i> extra elements integrated into the project. These elements are likely not complex.	Some issues with project quality; lacking polish in some areas. Product more proof-of-concept than real-world project.
C = 60-65	Improvement required	Below the expected degree of difficulty; <i>few or no</i> extra elements integrated into the project. These elements are likely not complex.	Significant issues with project quality; lacking polish overall. Product a proof-of-concept not a real-world project.
C- = 55-60			
D = 50-55	Serious improvement required	Well below the expected degree of difficulty; <i>few to no</i> extra elements integrated into the project.	Poor project quality; very little polish. Product demonstrates few successfully working features.
F = < 50	Extensive improvement required	Failed to successfully deliver a working product. Difficulty well below what is expected.	Product fails to achieve its basic and straightforward goals. Fails to demonstrate the quality of work required from 4 <sup>th</sup> year students.

**Elements:** hardware (sensors, cameras, or other devices), or software (OpenCV, ...). Should be focused more on the embedded side vs the web-UI side (less interested in the latest web-UI framework than getting an extra sensor integrated).

**Complex Elements:** difficult hardware to work with/control: scanning-keypad, I2C devices without high level libraries, bit-banging, PRU, kernel driver, networking multiple devices. Building custom hardware.

**Non-Complex Elements:** require little work to get working: Zen cape devices used in assignments, simple analog sensor using A2D, on/off digital devices. May involve a bread-board.