FIT2085 - Intro to Computer Science for Engineers Interview Prac 1 - Marking Rubric - Semester 1 2021

CRITERIA	UNSATISFACTORY	POOR	SATISFACTORY	GOOD	EXCELLENT
Task 1 – 20 marks					
Program Quality Example Major Mistakes: *Python lines not translated faithfully, creation of local (rather than global) variables, use of banned instructions* Example Minor Mistakes: *Unnecessary jumps in the if-then-elses, overly convoluted code, unncessarily reloading values within the same block of code, not branching on failure for if then instructions*	Many major mistakes/extremely low quality (0 marks)	Multiple major errors, quality of code is poor (instructions likely not obeyed). (1 mark)	At most 1 major error or many minor mistakes. Code quality is passable. (2.5 marks)	No major errors and at most a few minor mistakes. Good code quality overall. 4 marks)	At most 1 minor mistake. Great quality overall. (5 marks)
Documentation Example Major Mistakes: *No file header documentation, not using meaningful labels (loop, end_if etc), more than 1 complex instruction not commented* Example Minor Mistakes: *Low-level explanations (e.g., #is $t1>0?, rather than # is first> 0?), no spaces between meaningful blocks (each Python line must be its own block - more blocks are ok for complex instructions but will not be enforced), block comments missing, a complex instruction not commented, no indentation of code beneath label*	Many major mistakes/absent documentation. (0 marks)	Multiple major errors, documentation is lacking. (1 mark)	At most 1 major error or many minor mistakes. Documentation is acceptable. (2.5 marks)	No major errors and at most a few minor mistakes. Good documentation overall. (4 marks)	No major errors and at most 1 minor mistake. Great documentation overall. (5 marks)
Correctness Example of common mistakes in correctness: *Not negating the conditions of the if-then-else, not jumping over the elif-else branch after the first then, or the else branch after the elif-then, testing for the wrong condition (e.g., second > 0 rather than second >= 0), not doing the AND or OR correctly, and not printing a new line after the integer result.*	MIPS program is unable to pass any test of the 11 given in the test harness. (0 marks)	MIPS program only passes at most 4 tests of the 11 given in the test harness. (2 marks)	MIPS program only passes at least 6 tests of the 11 given in the test harness. (5 marks)	All tests in the given test harness run correctly, but some extra test in the extended testing harness or other input tested by demonstrator, does not. (8 marks)	MIPS code produces the correct output for my extended testing harness. (10 marks)
Task 2 – 20 marks					
Program Quality Example Major Mistakes: *Python lines not translated faithfully, creation of local (rather than global) variables, use of banned instructions* Example Minor Mistakes: *Unnecessary jumps in the if-then-elses, overly convoluted code, unncessarily reloading values within the same block of code, not branching on failure for if then instructions*	Many major mistakes/extremely low quality (0 marks)	Multiple major errors, quality of code is poor (instructions likely not obeyed). (1 mark)	At most 1 major error or many minor mistakes. Code quality is passable. (2.5 marks)	No major errors and at most a few minor mistakes. Good code quality overall. 4 marks)	At most 1 minor mistake. Great quality overall. (5 marks)
Documentation Example Major Mistakes: *No file header documentation, not using meaningful labels (loop, end_if etc), more than 1 complex instruction not commented* Example Minor Mistakes: *Low-level explanations (e.g., #is $t1>0?, rather than # is first> 0?), no spaces between meaningful blocks (each Python line must be its own block - more blocks are ok for complex instructions but will not be enforced), block comments missing, a complex instruction not commented, no indentation of code beneath label*	Many major mistakes/absent documentation. (0 marks)	Multiple major errors, documentation is lacking. (1 mark)	At most 1 major error or many minor mistakes. Documentation is acceptable. (2.5 marks)	No major errors and at most a few minor mistakes. Good documentation overall. (4 marks)	No major errors and at most 1 minor mistake. Great documentation overall. (5 marks)
Correctness Fatal mistake (all marks are 0): *Not storing the length and elements properly (first the array length, then the elements starting at index 0)* Example of common mistakes in Correctness: *Same as task 1, plus wrong condition in if-thens or loops, not coming back to the loop, all elements stored in +1/-1 position, min not updated properly, loop index not incremented, last/first element not stored or accessed to compute min, strings not printed properly, etc)*	MIPS program is unable to print any answer correctly, or a fatal mistake. (0 marks)	No fatal mistake, but MIPS program only passes at most 2 test of the 6 given in the test harness. (2 marks)	No fatal mistake, but MIPS program only passes at least 3 tests of the 6 given in the test harness. (5 marks)	No fatal mistake, and all tests in the given test harness run correctly, but some extra test in the extended testing harness or other input tested by demonstrator, does not. (8 marks)	No fatal mistake and MIPS code produces the correct output for the extended testing harness. (10 marks)
Task 3 – 20 marks					
Program Quality Fatal Mistake (all marks are 0): *Adding the length and the elements of the array onto the stack* Example Major Mistakes: *Similar to task 2 (but locals instead of globals now wanted), not saving $ra and $fp before allocating locals, not using $sp to store the argument before jal, arguments not stored on stack, not removing arguments from the stack.* Example Minor Mistakes: *Same as task 2, storing arguments on the stack using $fp instead of $sp, a function accessing its local variables or arguments using $sp rather than negative/positive $fp.*	Many major mistakes/extremely low quality (0 marks)	No fatal mistake but multiple major errors or code does not use the function calling convention at all. (1 mark)	No fatal mistake and at most 1 major error or many minor mistakes. Code quality is passable. (2.5 marks)	No fatal mistake but or major errors and at most a few minor mistakes. Good code quality overall. (4 marks)	At most 1 minor mistake. Great quality overall. (5 marks)
Documentation Example Major Mistakes: *No file header documentation, not using meaningful labels (loop, end_if etc), more than 1 complex instruction not commented* Example Minor Mistakes: *Low-level explanations (e.g., #is $t1>0?, rather than # is first> 0?), no spaces between meaningful blocks (each Python line must be its own block - more blocks are ok for complex instructions but will not be enforced), block comments missing, a complex instruction not commented, no indentation of code beneath label*	Many major mistakes/absent documentation. (0 marks)	Multiple major errors, documentation is lacking. (1 mark)	At most 1 major error or many minor mistakes. Documentation is acceptable. (2.5 marks)	No major errors and at most a few minor mistakes. Good documentation overall. (4 marks)	No major errors and at most 1 minor mistake. Great documentation overall. (5 marks)
Correctness Fatal mistake (all marks are 0): *Function call/return convention not used at all (e.g., function is just a label to which we jump and then jump back via another label).* Example of common mistakes in correctness: *Same as Task 2, not using the call/return convention (save/restore $ra and $fp in the stack, use -N($fp) for locals and N($fp) for arguments, use jr $ra for return, save arguments in the stack, store locals in the stack, etc), not translating main*	MIPS program is unable to print any answer correctly, or a fatal mistake. (0 marks)	No fatal mistake, but MIPS program only passes at most 2 test of the 6 given in the test harness. (2 marks)	No fatal mistake, but MIPS program only passes at least 3 tests of the 6 given in the test harness. (5 marks)	No fatal mistake, and all tests in the given test harness run correctly, but some extra test in the extended testing harness or other input tested by demonstrator, does not. (8 marks)	No fatal mistake and MIPS code produces the correct output for the extended testing harness. (10 marks)

Task 4 – 30 marks					
Program Quality Fatal Mistake (all marks are 0): *Adding the length and the elements of the array onto the stack* Example Major Mistakes: *Similar to task 2 (but locals instead of globals now wanted), not saving $ra and $fp before allocating locals, not using $sp to store the argument before jal, arguments not stored on stack, not removing arguments from the stack.* Example Minor Mistakes: *Same as task 2, storing arguments on the stack using $fp instead of $sp, a function accessing its local variables or arguments using $sp rather than negative/positive $fp.*	Many major mistakes/extremely low quality (0 marks)	Multiple major errors or code does not use the function calling convention at all. (2 marks)	At most 1 major error or many minor mistakes. Code quality is passable. (4 marks)	No major errors and at most a few minor mistakes. Good code quality overall. (6 marks)	At most 1 minor mistake. Great quality overall. (8 marks)
Documentation Fatal mistake (all marks are 0): *Python file not commented* Example Major Mistakes: *No file header documentation, not using meaningful labels (loop, end_if etc), more than 1 complex instruction not commented* Example Minor Mistakes: *Low-level explanations (e.g., #is $t1>0?, rather than # is first> 0?), no spaces between meaningful blocks (each Python line must be its own block - more blocks are ok for complex instructions but will not be enforced), block comments missing, a complex instruction not commented, no indentation of code beneath label*	Many major mistakes or a fatal mistake. (0 marks)	No fatal mistake but multiple major errors. (1 mark)	No fatal mistake and at most 1 major error or many minor mistakes. Documentation is acceptable. (3.5 marks)	No major errors or fatal mistake and at most a few minor mistakes. Good documentation overall. (5.5 marks)	No major errors or fatal mistakes and at most 1 minor mistake. Great documentation overall. (7 marks)
Correctness Fatal mistake (all marks are 0): *Function call/return convention not used at all (e.g., function is just a label to which we jump and then jump back via another label), not storing the length and elements properly (first the array length, then the elements starting at index 0)* Example of common mistakes in correctness: *Same as Task 3, mixing the indices from the two loops, not nesting the loops, doing too few/many iterations. not making enough space for the local variables*	MIPS program is unable to print any answer correctly, or a fatal mistake. (0 marks)	No fatal mistakes, but MIPS program only passes at most 2 test of the 6 given in the test harness. (3 marks)	No fatal mistakes but MIPS program only passes at least 3 tests of the 6 given in the test harness. (7.5 marks)	No fatal mistakes, all tests in the given test harness run correctly, but some extra test in the extended testing harness or other input tested by demonstrator, does not. (11 marks)	No fatal mistakes, MIPS code produces the correct output for the extended testing harness and all other inputs tested by demonstrator. (15 marks)

In-prac questions on tasks 1-4 (the quality of the answer determines the value of the multiplier for the marks obtained above: 0, 0.1, 0.2, ..., 0.8, 0.9 or 1)

During the interview, the demonstrator will ask you questions (like those ones indicated below) aimed at ensuring that the work you presented is really yours, and you perfectly understand the code your presented. If you cannot answer properly, the mark you obtained above will be multiplied by 0 (meaning, you lose all your marks for this prac). If you can answer somewhat but not all or not well, the mark you obtained above will be multiplied by 0.1, 0.2, ..., 0.8 or 0.9, depending on how well/many you answer (meaning, you get a corresponding fraction of the marks for this prac). If you can answer them all well, the mark you obtained above will be multiplied by 1.