



Assignment 8 (3%) Longest Sequence of Zeros

Deadline: Friday 3 December 2021 at 23:59 on Submittity

Working individually, complete the assignment below. Submit your solution to Submittity (<https://submit.scss.tcd.ie>). By submitting your solution, you are confirming that you have familiarised yourself with College's policy on plagiarism (<https://libguides.tcd.ie/plagiarism>).

Your mark will be the auto-graded mark assigned by Submittity (10 marks).

You are allowed to submit five attempts for the assignment without penalty. Subsequent attempts will attract a 1 mark penalty each, up to a maximum penalty of 5 marks.

Submittity will allow you eight "late days" over the full semester. This means, for example, you can submit one assignment late by eight days or eight assignments late by one day (or part thereof) each, without penalty. Once your "late days" are used up, you will receive zero marks for any late submissions.

Instructions

Design and write an ARM Assembly Language program that will determine the length of the longest contiguous sequence of 0s in the 32-bit value stored in R1. Your program should store the result in R0. For example, given the binary value shown below in R1, your program should store the result 7 in R0.

1101 0100 0010 0000 0010 0011 0110 0011