

Assembly and Machine Language

Homework 3

Write an assembly program that counts the number of occurrences of the “**1010**” bit pattern in a given input. You need to complete the template code made available to you. Your task is to write the **count_pattern** function which is left blank in the template code. Do not change other parts of the code. The function needs to receive its argument from the stack and store the return value in the **eax** register. Your code must be able to count overlapping matches. For example, it must count two matches in “101010”.

Example:

Input:

5386 ; 1010100001010

Output:

3

Input:

470 ; 111010110

Output:

1

Input:

34 ; 100010

Output:

0