Homework #5 (100 pts)

Write x86 assembly code that:
- Reads a single line of user input from stdin.
- Checks the user input for balanced brackets. Brackets include:
  - parentheses ( )
  - square brackets [ ]
  - and curly braces { }
- Balanced brackets:
  - the brackets are properly nested.
  - there are an equal number of left and right brackets.
- If the user's input is valid, write the entire line of input to stdout.
- If the user's input is invalid (i.e., contains unbalanced brackets), write an error message to stdout.
- Please name your assembly source file hw5.asm.
- Please submit a Makefile that assembles and links your assembly source.
  - You must assemble your source using the nasm assembler.
  - Your executable should be named hw5.
  - Your executable must run on a 32-bit Linux computer.

Examples: red text represents user input (stdin), blue text is stdout.

UNIX> ./hw5
()
[]{}

UNIX> ./hw5
()
[]{}

UNIX> ./hw5
()
[]{}

UNIX> ./hw5
[]{}
ERROR!!!

UNIX> ./hw5
{}
ERROR!!!

UNIX> ./hw5
{}
ERROR!!!