Project 2

* Converts an ASCII string into a binary value and displays a character on the UART indicating either an error or a successful conversion
* An equals character (‘=’) will be used to indicate the end of a number and a negative sign (’-’) before the number indicates that the value is negative.
* If it is negative then you will need to convert the value to its two’s compliment.
  + This is done by inverting all of the bits and then adding 1. Inverting, or performing a bitwise NOT on all bits, is equivalent to performing a NOR where both inputs to the NOR are the number you wish to NOT.
* The result of your signed conversion, either positive or negative, should be put in register $v0
* Use numbers through the UART to indicate the state of your program after completing a number input attempt.
  + If a number is successfully converted then it should output a ‘0’ character.
  + If a number contains an invalid character (i.e. 3a4 or #5) then it should output a ‘1’ character.
  + If the value is larger than can be stored in a single 32-bit register then it should output a ‘2’ character.
* Following each number input the calculator should revert to a state where it is ready to take another number as input. In other words, manually resetting the PLPTool simulation between numbers should not be required.
* Submit your program on blackboard with the format: lastname\_project2.plp.