Lab04: Flow Control

Note: You need to follow the printing style in the sample runs.

Task(s):

1. Write a MIPS assembly program that asks the user to enter an integer, prints the binary representation of this integer, and then displays the number of 1's in the binary representation of that integer.
   NOTE: computing the ones should be done in a loop.
   SAMPLE RUN:

   ```
   Mars Messages   Run I/O

   Enter an integer: 9
   Binary representation of the integer is: 00000000000000000000000000001001
   Clear    The number of 1's is: 2
            -- program is finished running --
   ```

2. Write a MIPS assembly program that asks the user to enter an integer and displays one of the following messages:
   a) Your number is a positive even number.
   b) Your number is a positive odd number.
   c) Your number is a negative even number.
   d) Your number is a negative odd number.
   e) You entered a zero value.
   SAMPLE RUNS:

RUN-a:	RUN-b:
```Mars Messages Run I/O Enter an integer: 2 Your number is a positive even number. Clear -- program is finished running --```	```Mars Messages Run I/O Enter an integer: 3 Your number is a positive odd number. Clear -- program is finished running --```
RUN-c:	**RUN-d:**
```Mars Messages Run I/O Enter an integer: -2 Your number is a negative even number. Clear -- program is finished running --```	```Mars Messages Run I/O Enter an integer: -3 Your number is a negative odd number. Clear -- program is finished running --```

   RUN-e:

   ```
   Mars Messages   Run I/O

   Enter an integer: 0
   You entered a zero value.
   Clear    -- program is finished running --
   ```