Problem FC-5 (3 parts)   Loops in MIPS and C

Part A Write a MIPS code fragment that corresponds to this C fragment. Assume $1 holds N, and $2 holds Sum. Feel free to use additional registers, but use a minimum number of instructions and registers.

```
Sum = 0;
while (N!=0){
    Sum += N&1;
    N = N >> 1;
}
```

Label	Instruction	Comment

Part B Briefly describe what the code fragment in **Part A** computes.

Part C Write MIPS code that implements the following expression. The loop body is already listed. Use **$3** for **N** and additional registers as needed.

```
for (N = 0; N < 100; N++) { loop body }
```

Label	Instruction	Comment
	…	# loop body