**Problem FC-2 (3 Parts)**                    **Branches, Jumps, Loops**

**Part A** Write code that branches to **Label** when $1 is greater than 100. Modify only $2.

| label | instruction | comment |
|---|---|---|
|  |  |  |
|  |  |  |
|  |  |  |

**Part B** Complete this subroutine that searches for the maximum value in a 100 element array (base address = **Array**). Return the result in $3. Use $1, $2, $3, and $4 as required.

| Label | Instruction | Comment |
|---|---|---|
| Max: | `addi $1, $0, 396` | `# init array offset` |
|  | `lw   $3, Array($1)` | `# load initial max` |
| Loop: |  | `# next element` |
|  |  | `# load element` |
|  |  | `# compare to Max` |
|  |  | `# if New <= Max, skip` |
|  |  | `# else set new Max` |
| Skip: |  | `# if not last, loop` |
|  | `jr   $31` | `# return to caller` |

**Part C** State the three primary differences between MIPS branches and jumps.

|  | **branches** | **jumps** |
|---|---|---|
| **1:** |  |  |
| **2:** |  |  |
| **3:** |  |  |