Computer Organization and Architecture

Chapter 3 MIPS ISA: Exercise Chantana Chantrapornchaiฃฃ จันทนา จันทราพรชัย Dept. of Computer Engineering, Faculty of Engineering, Kasetsart University

Selected Exercises from my text book.

1. Implement following C code in MIPS Assembly

```
while (x < 10) {
y += x*10*x-- + q;
q = q + 10;
}
```

Assuming that memory addresses of x, y, and q are at 2000, 2004, 2008 respectively. Show instruction formats and total size of instructions.

2. Implement following C code in MIPS Assembly

$$A = B * C + D * E;$$

Assuming that A, B, C, D, E memory address are greater than 2000. Show instruction formats and the total number of instructions.

3. Implement following C code in MIPS Assembly

i=0; while (i < 100) { A[i] = A[i] + 4; i++; }

Assuming that memory address of A is start at 1000 and i is 4000 respectively. Show instruction formats and the total number of instructions.