

NYCU Computer Organization HW 2

1. What is the compiled RISC-V assembly code?

```
int leaf_example (int g, int h, int i, int j)
{
    int f;
    f = (g + h) - (i + j);
    return f;
}
```

The parameter variables g, h, i, and j correspond to the argument registers x10, x11, x12, and x13, respectively, and f corresponds to x20. The compiled program starts with the label of the procedure: leaf_example

2. What is the RISC-V assembly code?

```
int fact (int n)
{
    if (n < 1) return 1;
    else return ( n * fact(n - 1));
}
```

The parameter variable n corresponds to the argument register x10. The compiled program starts with the label of the procedure and then saves two registers on the stack, the return address and x10.

3. What is the RISC-V assembly code to load this 32-bit constant into register x19?

```
00000000 00111101 00000101 00000000
```

4. What is the assembly language statement corresponding to this machine instruction?

```
00578733hex
```