1. Write the MIPS code for the following program that generates the power of a number 10. The C code is

```c
Main() {
    print_str("The power is: ");
    print_int(power(3));
}
int Power(int n) {
    if (n==0)
        return 1;
    else
        return (10 * power(n-1));
}
```

2. Compute

\[ e = \frac{(a \times b) + (c \times d)}{d} \]

in the following machines:
(a) Three-address
(b) Two address
(c) One address
(d) Zero address

3. Explain briefly the kind of hazards caused by the following pair of statements and which two stages in the pipeline get involved in the hazard: (assuming a MIPS architecture and pipelining)

(a) `lw $s2, addr
   addu $s1, $s2, $s3`
(b) `lw $s1, addr
    beqz $s1, next`

4. Reschedule the MIPS assembly code given below to avoid hazards. Hint: You need to fill in the branch delay slot with some instruction, if not use a `nop`.

```
loop: lw $s0, 0($t0)
      lw $s1, 0($t1)
      mul $s0, $s0, $s1
      add $s2, $s0, $s2
      addi $t0, $t0, 0x8
      addi $t1, $t1, 0x8
      sub $s3, $s4, $t0
      bnez $s3, loop
```