Com S 321 **Homework 6** **John Collin Vincent**

1.

```
begin:  addi   $t0, $zero, 0        # $t0 = 0
        addi   $t1, $zero, 1        # $t1 = 1
 loop:  slt    $t2, $a0, $t1        #     ↓
        bne    $t2, $zero, finish   # while($a0 < $t1){
        add    $t0, $t0, $t1        # $t0 += $t1: sums $t1, so all odd numbers
        addi   $t1, $t1, 2          # $t1 += 2 :starts at 1 and counts odd numbers
        j      loop                 # }
        add    $v0, $t0, 0          # return $t0
```

this program sums all odd numbers that are less than the input

2.

```
loop:  add   $t0, $s3, $s3
       add   $t0, $t0, $t0
       add   $t0, $t0, $s5
       lw    $t0, 0($t0)
       add   $s1, $s1, $t0
       add   $s3, $s3, $s4
       bne   $s2, $s3, loop
```

3.

$t0 contains the largest value from $b[0] \dots b[9]$
$t2 contains $b[9]$

4.

```
Loop:  lw    $v1, 0($a0)       # Read next word from source
       sw    $v1, 0($a1)       # Write to destination
       beq   $v1, $zero, end   # end if word copied is = 0
       addi  $a0, $a0, 4       # Advance pointer to next source
       addi  $a1, $a1, 4       # Advance pointer to next destination
       addi  $v0, $v0, 1       # Increment count of words copied
       j     loop
 end:
```