

Eric Chen
11381898
CPTS 260 HW2

1.

```
# $t0 stores constant 10
# $t1 stores i
# $t2 stores int 2
# $t3 stores result of (i<10)
# $t4 stores register to store mod
# $t5 stores k
```

```
.text
.globl main
```

main:

```
    li $t0, 10
    li $t2, 2
    li $t1, 0
```

LOOP:

```
    slt $t3, $t1, $t0      # set $t3 to 1 if $t1 < $t0, else 0
    beq $t3, $zero, EXIT   # EXIT if result of slt is 0

    div $t1, $t2            # $t1 % $t2
    mfhi $t4               # "Move from HI", mod is stored here
    addi $t1, $t1, 1        # increment i by 1
    bne $t4, $zero, ELSE    # if (mod != 0)

    add $t5, $t5, $t5       # k multiplies itself and stores result
                           # in itself
    addi $t5, $t5, 1        # add 1 to k

    ELSE:                  # if (mod == 0) is false
    j LOOP                 # loops
    EXIT:
```

2.

```
# $t0 stores myString
# $t1 stores d
# $t2 stores current char in string
# $t3 stores len
# READ ME: the statement len=P-A results in the # of loops
# before finding the value so to implement it, I used $t3
# to store len and it increments with every loop
```

```
.text
.globl main
```

```
main:
    la $t0, myString
    la $t1, d
LOOP:
    lbu $t2, ($t0)           # get character at current location
    beq $t1, $t2, EXIT       # exit loop if letter d
    beq $zero, $t2, EXIT     # exit loop if null/end of string
    addi $t0, $t0, 1         # increment current string location
    addi $t3, $t3, 1         # increments len
    j LOOP
EXIT:
```

```
.data
myString: .asciiz "world"
d: .asciiz "d"
```