Hw 2

1.) lb x19, 0(x18)

lbu x19, 0(x18) x = 0x93440c85

lb x19, 0(x18) = 0xffffff85

lbu x19, 0(x18) = 0x00000085

2. temp = A[0];

lw x19, 0(x20) # x19 = A[0]

A[0] = A[1];

lw x1, 4(x20) x1 = A[1]

sw x1, 0(x20) x1 = A[0]

A[1] = A[2];

lw x2, 8(x20) x2 = A[2]

sw x2, 4(x20) x2 = A[1]

A[2] = Temp;

sw x19, 8(x20) x19 = temp

3. temp = A[i+1]

```
addi x3, x0, 4      x3 = 4 ;
mul  x3, x18, x3    x3 = i x 4 ;
add  x3, x20, x3    x3 = &A[0] + x3 = &A[i] ;
lw   x19, 4(x3)     x19 = A[i+1] ;
lw   x23, 0(x3)     x23 = A[i] ;
A[i+1] = A[i]
sw   x23, 4(x3)
```

4. A[i];

```
addi x3, x0, 4      x3 = 4
mul  x3, x18, x3    x3 = i x 4 ;
add  x3, x20, x3    x3 = &A[0] + x3 = &A[i]
lw   x23, 0(x3)     x23 = A[i]
   if(A[i] == 1) ;
      temp +1 ;
   bne x23, 1, else if
    addi x19, x19, 1        -> Jump, exit
   else if (A[i] == 2 )
         temp += 2;
   else if : bne  x23, 2, else
         addi x19, x19, 2
         jump, exit
   else temp+= 3 ;
      else : addi , x19, x19, 3
   Exit:
```

5. A[i]

```
addi x3, x0, 4    x3 = 4;
mul  x3, x18, x3  x3 = i x 4;
add  x3, x20, x3  x3 = &A[0] + x3 = &A[i];
lw   x23, 0(x3)   x23 = A[i]
add  x18, x0, x0  i = 0
addi x8, x0, 1000 x8 = 1000
Loop:
    bge  x18, x8, Done
    bit  x19, x23, else
    addi x19, x19, 1  # temp ++
    addi x18, x18, 1
    jump loop
else:
    addi x19, x19, -1  # temp--

addi x18, 18, 1  # i++
    jump loop.
Done:
```