Nirbhay Sharma (B19CSE114)
MIPS - Programming Assignment

1)
When greater than branch does not execute

```
PC         = 4194364
EPC        = 0
Cause      = 0
BadVAddr   = 0
Status     = 805371664

HI         = 0
LO         = 0

R0   [r0] = 0
R1   [at] = 0
R2   [v0] = 10
R3   [v1] = 0
R4   [a0] = 4
R5   [a1] = 2147479176
R6   [a2] = 2147479196
R7   [a3] = 0
R8   [t0] = 3
R9   [t1] = 4
R10  [t2] = 1
R11  [t3] = 0
R12  [t4] = 0
R13  [t5] = 0
R14  [t6] = 0
R15  [t7] = 0
R16  [s0] = 0
R17  [s1] = 0
R18  [s2] = 0
R19  [s3] = 0
R20  [s4] = 0
R21  [s5] = 0
```

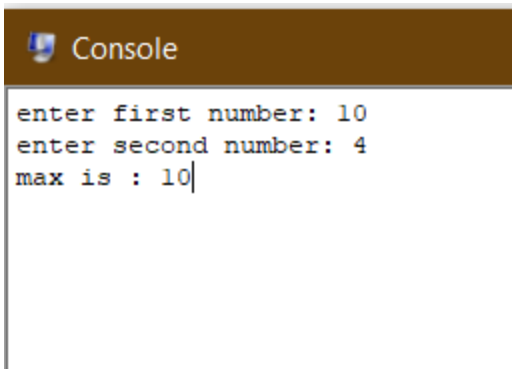
When greater than branch executed

```
PC         = 4194376
EPC        = 0
Cause      = 0
BadVAddr   = 0
Status     = 805371664

HI         = 0
LO         = 0

R0   [r0] = 0
R1   [at] = 1
R2   [v0] = 10
R3   [v1] = 0
R4   [a0] = 4
R5   [a1] = 2147479176
R6   [a2] = 2147479196
R7   [a3] = 0
R8   [t0] = 5
R9   [t1] = 4
R10  [t2] = 9
R11  [t3] = 0
R12  [t4] = 0
R13  [t5] = 0
R14  [t6] = 0
R15  [t7] = 0
R16  [s0] = 0
R17  [s1] = 0
R18  [s2] = 0
R19  [s3] = 0
R20  [s4] = 0
R21  [s5] = 0
```

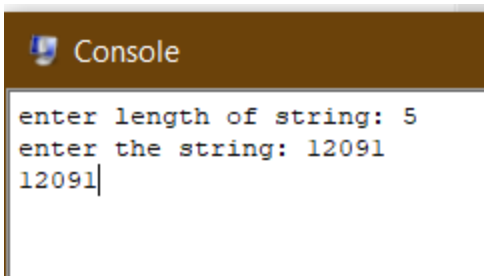
2) since multiplication is repetitive addition so going by the same approach (since mul,mult operations are not allowed)

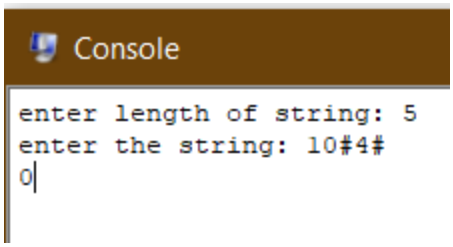
```
PC          = 4194364
EPC         = 0
Cause       = 0
BadVAddr    = 0
Status      = 805371664

HI          = 0
LO          = 0

R0   [r0]  = 0
R1   [at]  = 0
R2   [v0]  = 10
R3   [v1]  = 0
R4   [a0]  = 4
R5   [a1]  = 2147479176
R6   [a2]  = 2147479196
R7   [a3]  = 0
R8   [t0]  = 200
R9   [t1]  = 10
R10  [t2]  = 2000
R11  [t3]  = 0
R12  [t4]  = 1
R13  [t5]  = 0
R14  [t6]  = 0
R15  [t7]  = 0
R16  [s0]  = 0
R17  [s1]  = 0
R18  [s2]  = 0
R19  [s3]  = 0
R20  [s4]  = 0
R21  [s5]  = 0
```

3)



4) output of mips code on the following inputs





5) output of implemented code