

# CSO Assignment 1

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## File Structure:

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```
2021101034
├── q1
│   ├── q1.c
│   └── q1.s
├── q2
│   ├── q2.c
│   └── q2.s
├── q3
│   ├── q3.c
│   └── q3.s
├── q4
│   ├── q4.c
│   └── q4.s
└── q5
    ├── q5.c
    └── q5.s
```

## Q1:

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- if denominator is 0 , returning -1
- Calculating the quotient and remainder such that remainder is always positive
- used the function name "remaindr" instead of "remainder" because of conflict with the inbuilt "remainder" function

## Q2:

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- assuming  $\text{gcd}(a, b) = \text{gcd}(|a|, |b|)$  and  $\text{gcd}(a, 0) = |a|$

## Q3:

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- if  $N \leq 1$  returning -1 (Note: the main code is written to print "False" irrespective of the function returning 0 or -1)

- if N is Prime returning 1
- if N is Not Prime returning 0

## Q4:

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- Reusing the code from Q3 to check prime.
- Prints 1 for  $n=1$  (special case)
- Prints -1 if  $n \leq 0$

## Q5:

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- if  $N \leq 0$  Prints -1
- Taken Care of Overflow cases.