

# ECS102 - Lab Task 5 - Algorithm

## Q.1

- Define variables: num
- Take input for num
- Initialize: None
- Test:  $\text{num} \geq 0$
- Decrement:  $\text{num}--$
- Execute: If  $\text{num} \% 2 == 0$ , print num

## Q.2

- Define variables: num ,count, digit
- Take input for num
- Initialize: digit = 1, count = 10
- Test:  $\text{num}/\text{count} \neq 0$
- Increment:  $\text{count} \times= 10$
- Execute: digit++
- Print "digit"

## Q.3

- Define variables: num, fact, n
- Take input for num
- Assign  $n = \text{num}$
- Initialize: fact = 1
- Test:  $\text{num} \neq 0$
- Decrement:  $\text{num}--$
- Execute:  $\text{fact} \times= \text{num}$
- Print fact

## Q.4

- Define variables: sum, x, n, count, a
- Take input for values of x and n

- Initialize:  $\text{sum}=1$ ,  $\text{count}=1$ ,  $a=1$
- Test:  $\text{count} \leq n$
- Increment:  $\text{count}$  by 1
- Execute:  $a = a * x$  and  $\text{sum} += a$
- Print  $\text{sum}$

## Q.5

- Define variables:  $\text{num1}$ ,  $\text{num2}$ ,  $\text{oper}(\text{operator})$
- Take input for  $\text{num1}$  and  $\text{num2}$
- Print "Operation Menu:"
- Print "1. Addition"
- Print "2. Subtraction"
- Print "3. Multiplication"
- Print "4. Division"
- Take input for  $\text{oper}$
- Switch for  $\text{oper}$
- Case1:  $\text{num1} + \text{num2}$
- Case2:  $\text{num1} - \text{num2}$
- Case3:  $\text{num1} * \text{num2}$
- Case4:  $\text{num1} / \text{num2}$
- Default: Print "Invalid operator input"