**Flowcharts:-**

Normal Delivery

Sorting Regular   
Packages

Package = input

Fragile Packages

Urgent Delivery Packages

False

False

True True  
  
  
  
  
  
  
  
Problem 2:

Urgent/Fast Delivery

B == item

NUM = INPUT

false

Despense item

true

IF amount >= price

false true

PRINT”Insufficient funds”

**Pseudocodes:-  
1.**

function findSmallestNumber(a, b, c):

smallest = a

if b < smallest:

smallest = b

if c < smallest:

smallest = c

return smallest

**3.**

function basicCalculator():

print "Enter the first number:"

num1 = read input

print "Enter the second number:"

num2 = read input

print "Enter the operator (\* for multiplication, / for division):"

operator = read input

if operator == "\*":

result = num1 \* num2

print "The result of", num1, "\*", num2, "is", result

else if operator == "/":

result = num1 / num2

print "The result of", num1, "/", num2, "is", result

**Algorithms:-**

1. We will first check if n is less than or equal to 1 (not prime), or if it is 2 or 3 (prime). Next, we will rule out divisibility by 2 or 3. For larger numbers, test divisibility by integers starting from 5 up to the square root of n, incrementing by 6 each step and checking both d and d+2d+2d+2 to avoid even numbers and multiples of 3. If n is divisible by any of these tested integers, it is not a prime number; otherwise, it is prime.
2. We will first prompt the user for the day number. Compute the day of the week using the formula (dayNumber - 1) % 7`, which adjusts the day number to account for the starting day. Map the result to the day of the week, with 0 corresponding to Monday, 1 to Tuesday, and so on through 6 for Sunday. Finally, output the corresponding day of the week based on this calculation.
3. We will take take two positive integers as input. Apply the algorithm by repeatedly replacing the larger number with the remainder of its division by the smaller number until the smaller number becomes zero. The GCD is the non-zero remainder when this process ends. Finally, output the remaining non-zero number, which is the GCD of the original two numbers.
4. Top of Form
5. Bottom of Form