

# Assignment #1

Problem 1:- Pseudocode :-

START

PRINT "Enter the speed in Kilometres per seconds:"

INPUT Kps

SET mph = 0

CALCULATE mph =  $(Kps * 3600) / 1.609$

PRINT "Speed in miles per hour is : ", mph

END

Flowchart :-

START



PRINT "Enter speed in Kilometres per second:"



INPUT KPS



CALCULATE mph =  $(KPS * 3600) / 1.609$



PRINT "Speed in miles per hour is : ", mph



END

IPO Chart :-

Input	Processing	Output
* Enter the speed in Kilometres per second	* Calculate the speed in miles per hour using the formula :- $mph = (Kps * 3600) / 1.609$	* Display the speed in miles per hour.
Module Ref.		
* READ		
* CALCULATE	* PRINT	

## Problem 2 :-

Pseudocode:- START

PRINT "Enter a positive number greater than zero:"

INPUT Num

IF Num > 0

THEN SET Rem = 0

Rem = Num % 2

IF Rem == 0

THEN PRINT "Number is even"

ELSE

PRINT "Number is odd"

ENDIF

ELSE IF Num ≤ 0

THEN PRINT "Invalid Input"

END

Flowchart:-

START



PRINT "Enter a positive number greater than zero:"



INPUT Num

Is

Num > 0?

No

PRINT "Invalid Number"

Yes

CALCULATE Rem = Num % 2

Is

Rem == 0?

No

PRINT "Number is odd"

Yes

PRINT "Number is even"

END

### IPO Chart:-

Input	Processing	Output
* Enter a positive number that is greater than zero.	* Check if the number is greater than zero.	* "Invalid Input" if number is not greater than zero.
Module Ref.	* If number is less than or equal to zero, print "Invalid Input".	* "Even" if number is greater than zero and divisible by 2.
* READ	* If number is greater than zero, check whether it's even or odd.	* "Odd" if number is
* Conditional Statement	* Remainder = Number mod 2	greater than zero and not divisible by 2.
* Calculate	* If remainder is zero, print "Even"	
* Conditional Statement	* Else, print "Odd"	
* PRINT		

### Problem 3:-

Pseudocode :-

START

PRINT "Enter the province you are from : "

INPUT province

IF province == "Sindh"

THEN PRINT "Enter your age :

INPUT age

IF age ≥ 18

THEN PRINT "It is legal to marry."

ELSE

PRINT "It is illegal to marry."

ENDIF

ELSE IF province == "Punjab"

THEN PRINT "Enter your gender : "

INPUT gender

PRINT "Enter your age : "

INPUT age

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IF gender = "Male"
THEN IF age ≥ 18
    THEN PRINT "It is legal to marry."
ELSE
    PRINT "It is illegal to marry."
ENDIF
ELSEIF gender = "Female"
THEN IF age ≥ 16
    THEN PRINT "It is legal to marry."
ELSE
    PRINT "It is illegal to marry."
ENDIF
ENDIF
END

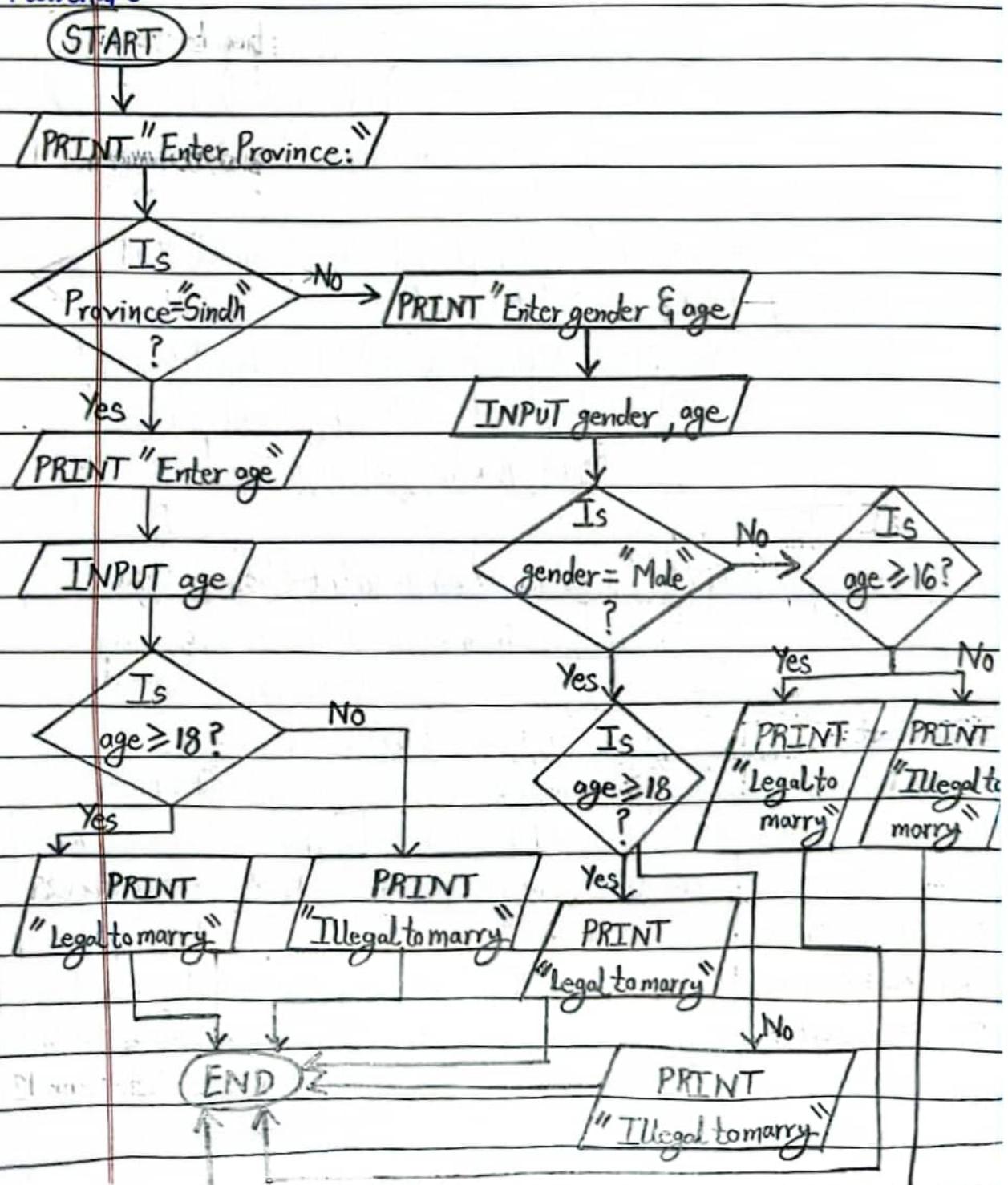
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IPO Chart:-

Input	Processing	Output
* Enter the province. * For Sindh, enter age only.	* Check the user's province. * For Sindh, check whether the user age is below 18 or not.	* For Sindh: "Legal to marry" if age is equal or greater than 18 "Illegal to marry" if age is below 18
* For Punjab, enter age and gender.	* If age is equal or greater than 18, print "Legal to marry" * Else, print "Illegal to marry"	"Illegal to marry" if age is below 18
Module Ref.	* For Punjab, check the user's gender.	* For Punjab:
* READ * Conditional Statement	* If male, check if age is below 18 or not.	"Legal to marry" if female age is equal or greater than 16, or, male age is equal or greater than 18.
* READ	* If age is equal or greater than 18,	
* READ	print "Legal to marry."	
* Conditional Statement	* Else, print "Illegal to marry"	
* PRINT	* If female, check if age is below 16 or not.	

- \* If age is equal or greater than 16, print "Legal to marry."
  - \* Else, print "Illegal to marry."
- "Illegal to marry" if female age is below 16 or male age is below 18.

Flowchart:-



### Problem 4:-

Pseudocode:-

START

PRINT "Enter the total cash Mr.Bhoola has:"

INPUT total\_cash

PRINT "Enter the per kg costs of onions, apricots, grapes & tomatoes:"

INPUT o\_cost, a\_cost, g\_cost, t\_cost

PRINT "Enter the amount of onions, apricots, grapes & tomatoes

in kg that Mr.Bhoola wants to buy:"

INPUT a, b, c, d

CALCULATE total\_cost =  $(a * o\_cost) + (b * a\_cost) + (c * g\_cost)$   
 $+ (d * t\_cost)$

IF total\_cash == total\_cost

THEN PRINT "Order placed. Thank you!"

ELSE IF total\_cash > total\_cost

THEN CALCULATE change = total\_cash - total\_cost

PRINT "Order placed and here is your change."

Thank you!, change

ELSE

PRINT "Cash paid is insufficient."

END

### IPO Chart:-

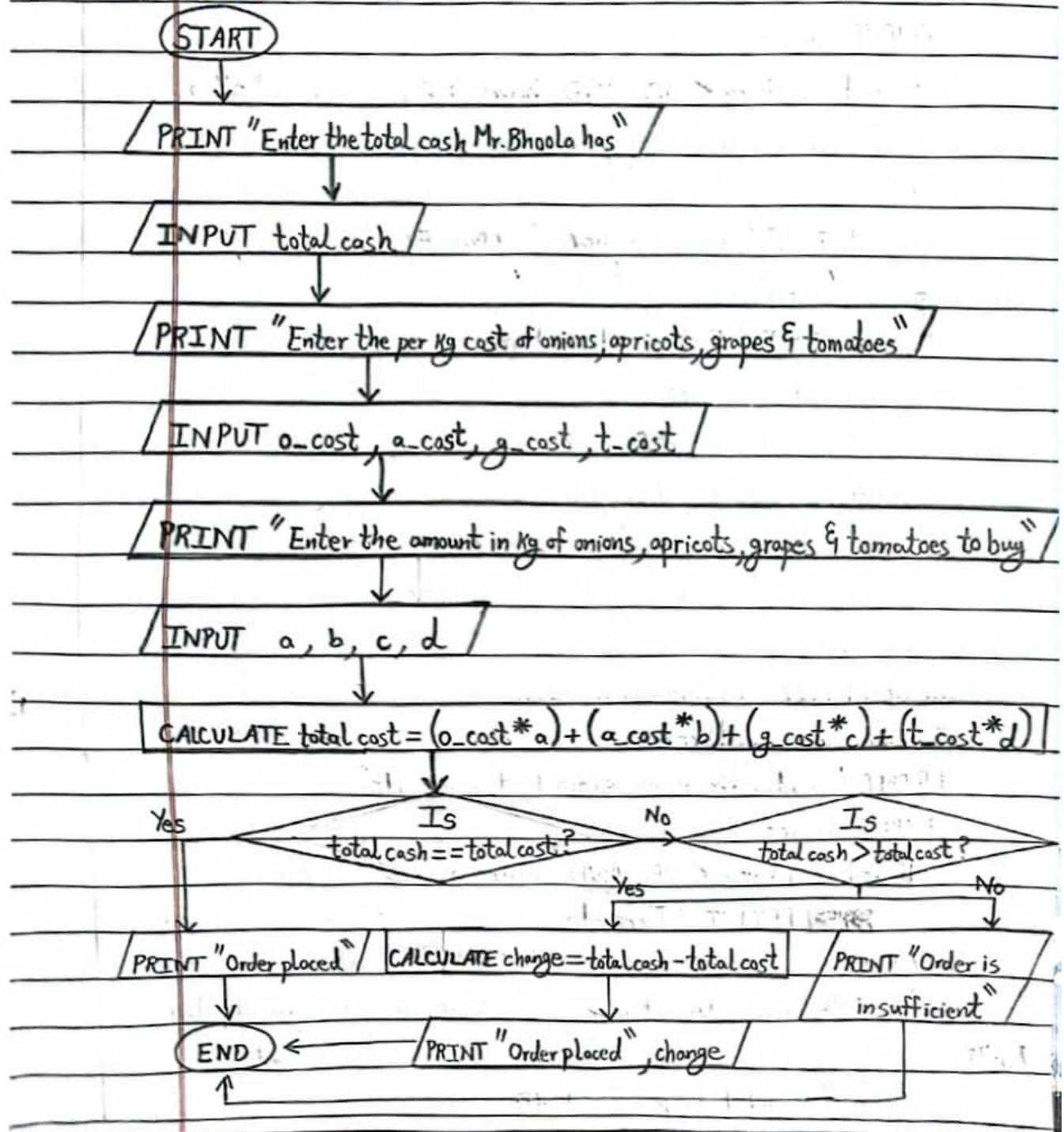
Input	Processing	Output
* Enter the total cash Mr.Bhoola has.	* Calculate the total cost of the entire grocery of Mr.Bhoola:- $\text{total cost} = (\text{onions kg} * \text{onions cost}) + (\text{apricots kg} * \text{apricots cost}) + (\text{grapes kg} * \text{grapes cost}) + (\text{tomatoes kg} * \text{tomatoes cost.})$	* Print "Place order" if total cash is equal to total cost.
* Enter the per kg price of each fruit & veggies		* Print change and "Place order" if total
* Enter the amount of each fruit/veggie in kg, Mr.Bhoola wants to buy.		cash is greater than total cost.
	* Check whether Mr.Bhoola's total cash is equal to the total cost.	



### Module Ref.

*READ	• If equal, then print "Place order".	* Print "Cash is not sufficient" if total
*READ	• If total cash is greater than total cost, then calculate change = total cash - total cost,	sufficient" if total
*READ	print "Place order" and change.	cash is less than
*CALCULATE	Else, print "Cash is not sufficient"	total cost
*Conditional Statement		
*PRINT	when total cash is less than total cost	

### Flowchart :-



### Problem 5 :-

Pseudocode:-

START

PRINT "What type of crop is being monitored? : "

INPUT crop

IF crop == "wheat"

THEN PRINT "Enter soil moisture : "

INPUT soil\_moisture

PRINT "Enter the hours since last rainfall : "

INPUT hours

IF soil\_moisture < 30 AND hours > 24

THEN PRINT "Irrigate"

ELSE

PRINT "Do not irrigate" ENDIF

ELSEIF crop == "corn"

THEN PRINT "Enter soil moisture : "

INPUT soil\_moisture

IF soil\_moisture < 40

THEN PRINT "Irrigate"

ELSE

PRINT "Do not irrigate" ENDIF

ELSEIF crop == "rice"

THEN PRINT "Enter soil moisture : "

INPUT soil\_moisture

PRINT "Enter the hours since last rainfall : "

INPUT hours

IF soil\_moisture < 25 AND hours > 24

THEN PRINT "Irrigate"

ELSE

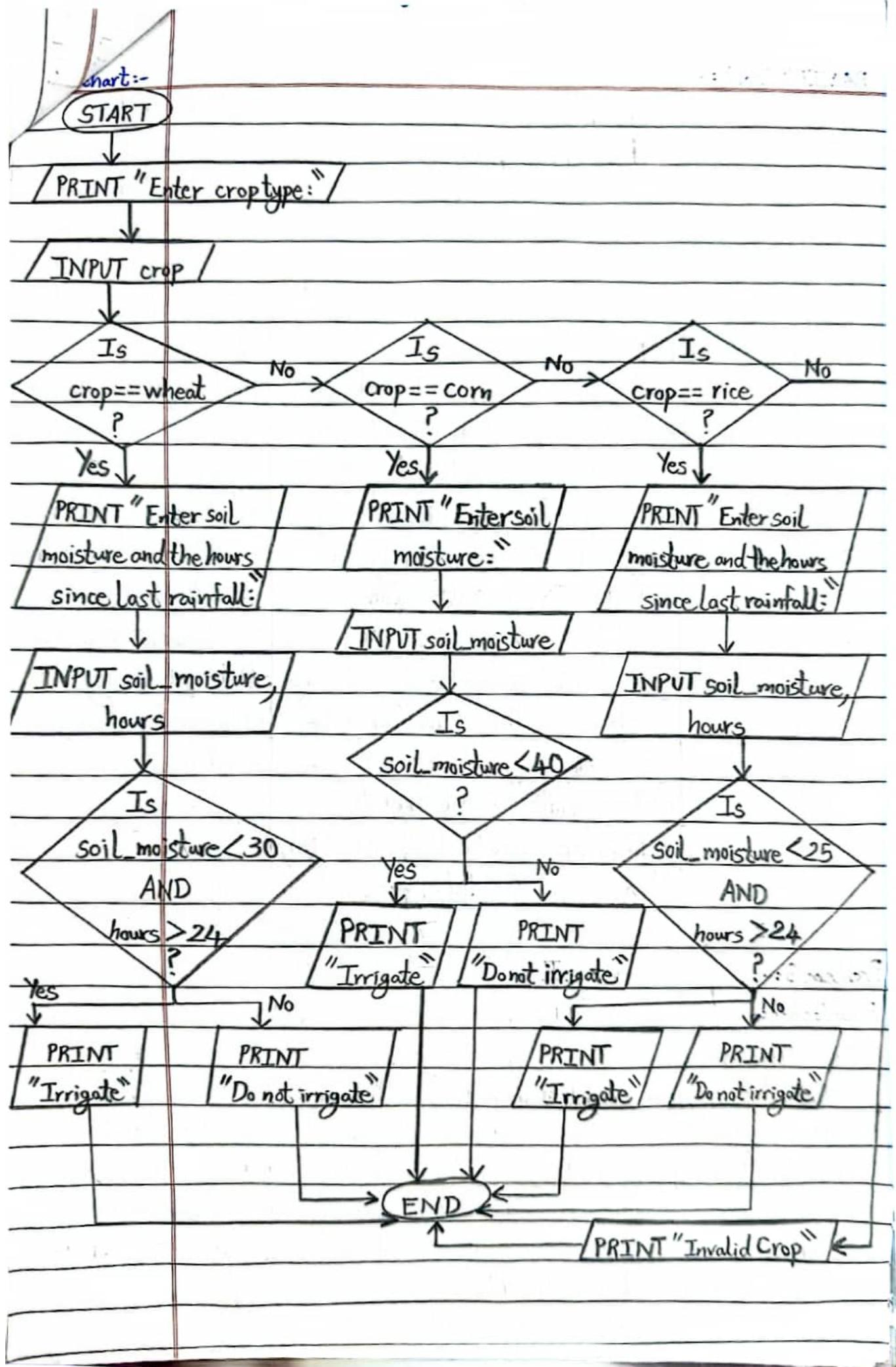
PRINT "Do not irrigate" ENDIF

ELSE

PRINT "Invalid crop" END

START

PRINT "Enter"



### IPO Chart :-

Input	Processing	Output
* Enter the type of crop being monitored * Enter soil moisture and hours since last rainfall for wheat and rice.	* Check the type of crop being monitored * If it is wheat, check its soil moisture and hours since last rainfall. • If soil moisture is below 30 and hours is above 24, then print "Irrigate" for wheat. • Else, print "Do not irrigate".	"Irrigate" if : • Soil moisture is below 30 and hours is above 24 for wheat. • Soil moisture is below 40 for corn.
* Enter soil moisture only for corn.	* If it is corn, check its soil moisture • If soil moisture is below 40 for corn, print "Irrigate". • Else, print "Do not irrigate".	• Soil moisture is below 25 and hours is above 24 for rice.
Module Ref.		* "Do not irrigate" if conditions for irrigation do not meet.
* READ * READ * READ * Conditional Statement * PRINT	* If it is rice, check its soil moisture and hours since last rainfall. • If soil moisture is below 25 and hours is above 24, then print "Irrigate" for rice. • Else, print "Do not irrigate". * If crop is not wheat, corn or rice, then print "Invalid crop".	* "Invalid crop" for the input of any other crop besides wheat, corn and rice.

### Problem 6:-

Pseudocode:-

START

PRINT "Enter your height in inches:"

INPUT height

PRINT "Enter your age:"

INPUT age

REPEAT

PRINT "Enter the ride:"

INPUT ride

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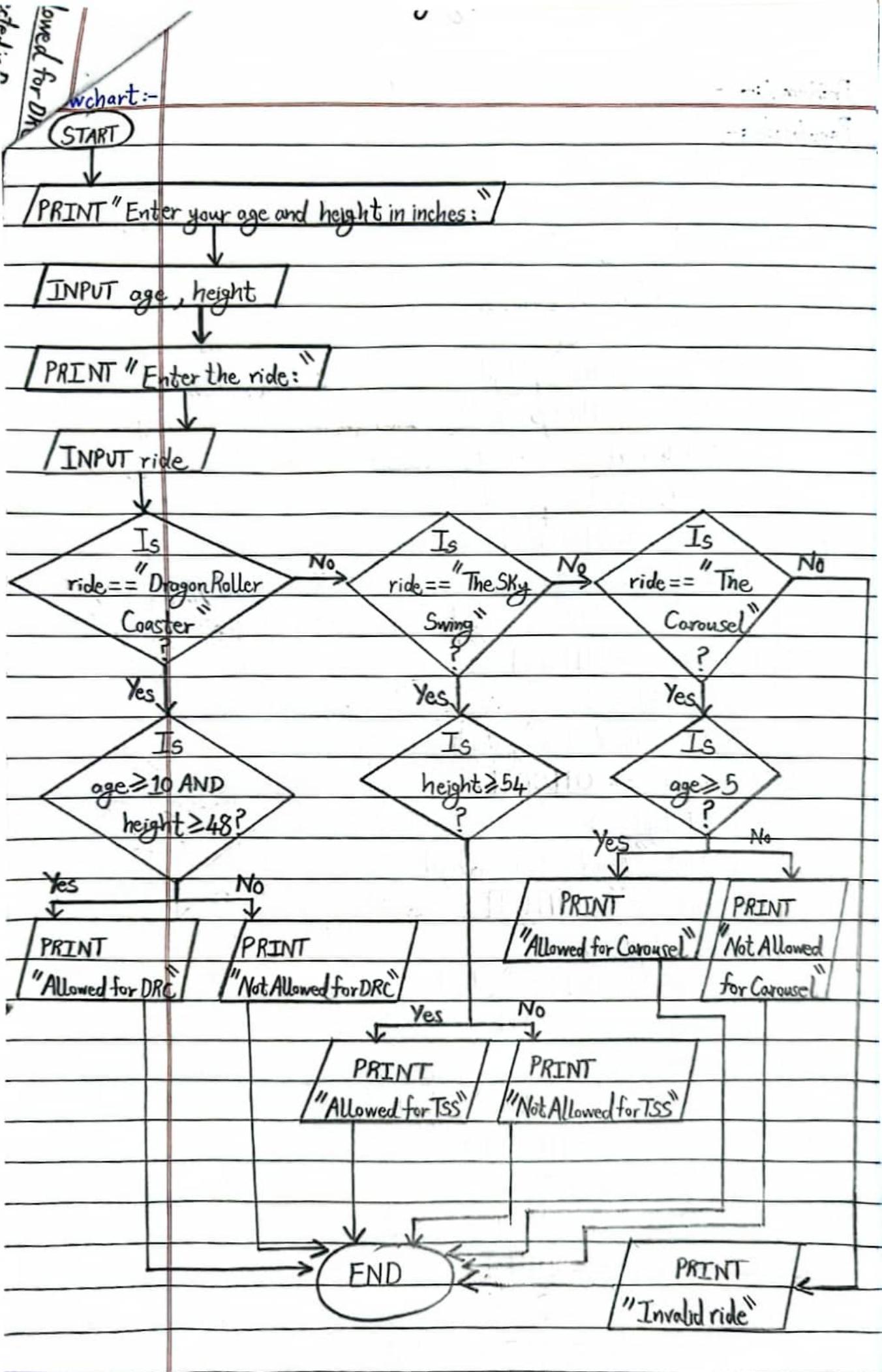
IF ride == "Dragon Roller Coaster"
    THEN IF height ≥ 48 AND age ≥ 10
        THEN PRINT "You meet the criteria for DRC."
    ELSE
        PRINT "Sorry, you do not meet the criteria for DRC"
    ENDIF
ELSE IF ride == "The Sky Swing"
    THEN IF height ≥ 54
        THEN PRINT "You meet the criteria for TSS"
    ELSE
        PRINT "Sorry, you do not meet the criteria for TSS"
    ENDIF
ELSE IF ride == "The Carousel"
    THEN IF age ≥ 5
        THEN PRINT "You meet the criteria for The Carousel"
    ELSE
        PRINT "Sorry, you do not meet the criteria for The Carousel"
    ENDIF
PRINT "Are you tired?"
INPUT tired
UNTIL tired == "Yes"
END

```

#### IPO Chart:-

Input	Processing	Output
* Enter height	* Check for the ride the user has selected	* "Allowed for DRC"
* Enter age	and check for its height and/or age conditions.	if ride selected is
* Enter if you are tired or not.	* If ride is Dragon Roller Coaster, check if the user's height is atleast 48 inches and age is atleast 10 years.	Dragon Roller Coaster, height is atleast 48 inches and age is atleast 10 years.

Module Ref.	<ul style="list-style-type: none"> <li>Else, print "Not allowed for DRC"</li> </ul>	* Not allowed for DRC
* READ	<ul style="list-style-type: none"> <li>If ride is The SKy Swing, check if the user's height is atleast 54 inches.</li> </ul>	if ride selected is Dragon Roller Coaster and conditions do not meet.
* READ	<ul style="list-style-type: none"> <li>If true, then print "Allowed for TSS"</li> </ul>	"Allowed for TSS" if
* Loop Structure	<ul style="list-style-type: none"> <li>Else, print "Not Allowed for TSS"</li> </ul>	ride selected is The SKy Swing and height is at least 54 inches.
* Conditional Statement	<ul style="list-style-type: none"> <li>If ride is The Carousel, check if the user's age is atleast 5 years.</li> </ul>	* "Not allowed for TSS" if ride selected is The SKy Swing and conditions do not meet
* Conditional Statement	<ul style="list-style-type: none"> <li>If true, then print "Allowed for Carousel"</li> <li>Else, print "Not Allowed for Carousel"</li> </ul>	* "Allowed for Carousel" if ride selected is Carousel and age is atleast 5 years
* PRINT	<ul style="list-style-type: none"> <li>* Ask the user if he/she is tired or not.</li> <li>* Repeat the process until user is tired</li> </ul>	* "Not Allowed for Carousel" if ride selected is Carousel and conditions do not meet



~~THE PR.~~  
Problem :-

Pseudocode :- START

SET digit = 0

PRINT "Enter the 7-digit number comprising of only 1s and 0s:"

INPUT number

IF number == 111110

THEN digit = 0

PRINT "Ground Floor", digit

ELSE IF number == 0110000

THEN digit = 1

PRINT "First Floor", digit

ELSE IF number == 1101101

THEN digit = 2

PRINT "Second Floor", digit

ELSE IF number == 1111001

THEN digit = 3

PRINT "Third Floor", digit

ELSE IF number == 0110011

THEN digit = 4

PRINT "Fourth Floor", digit

ELSE IF number == 1011011

THEN digit = 5

PRINT "Fifth Floor", digit

ELSE IF number == 1011111

THEN digit = 6

PRINT "Sixth Floor", digit

ELSE IF number == 1110000

THEN digit = 7

PRINT "Seventh Floor", digit

ELSE IF number == 1111111

THEN digit = 8

PRINT "Eighth Floor", digit

ELSE IF ny  
THE  
PR.

ELSE IF number == 1111011

THEN digit = 9

PRINT "Ninth Floor", digit

ELSE

PRINT "Invalid Input"

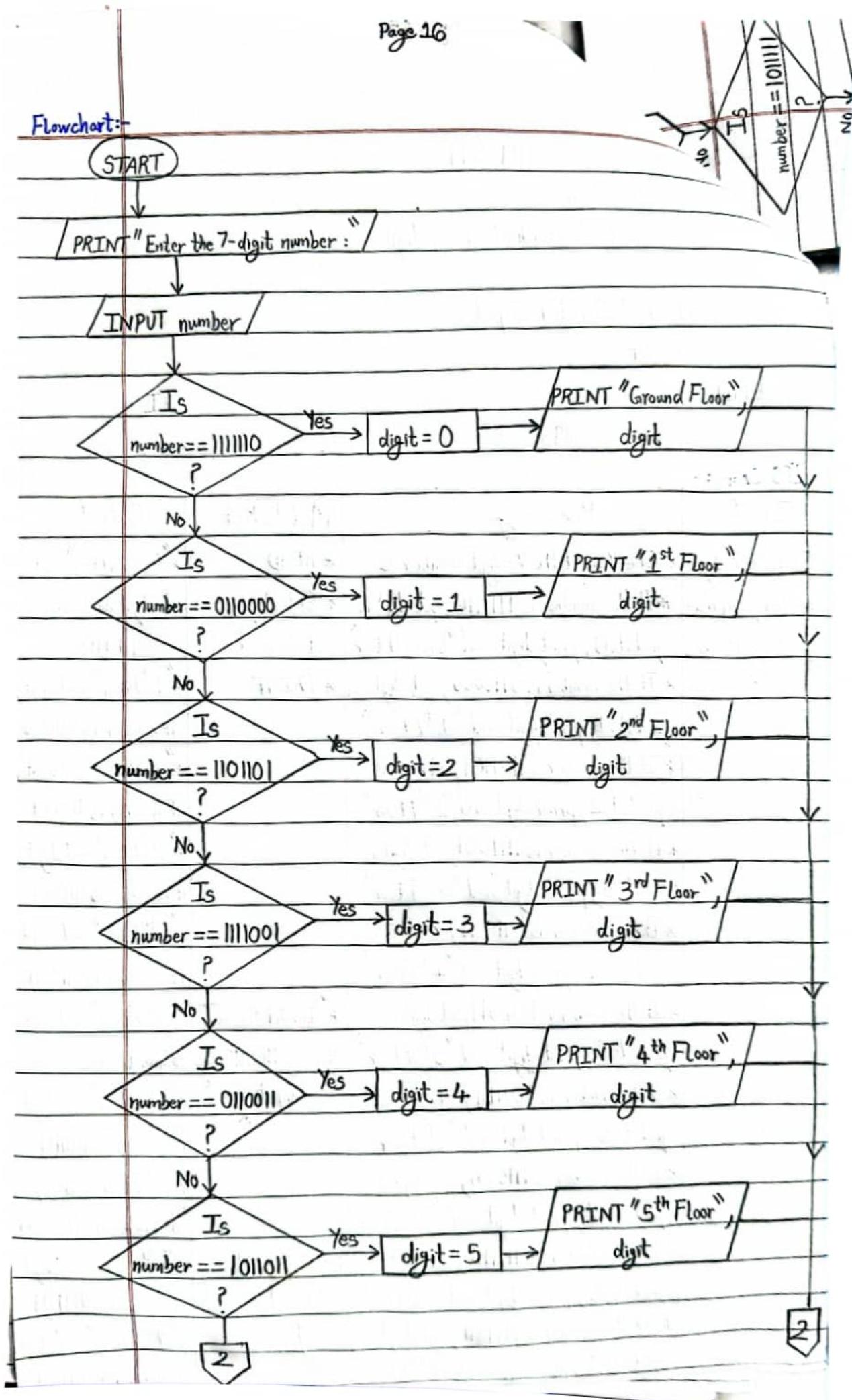
ENDIF

END

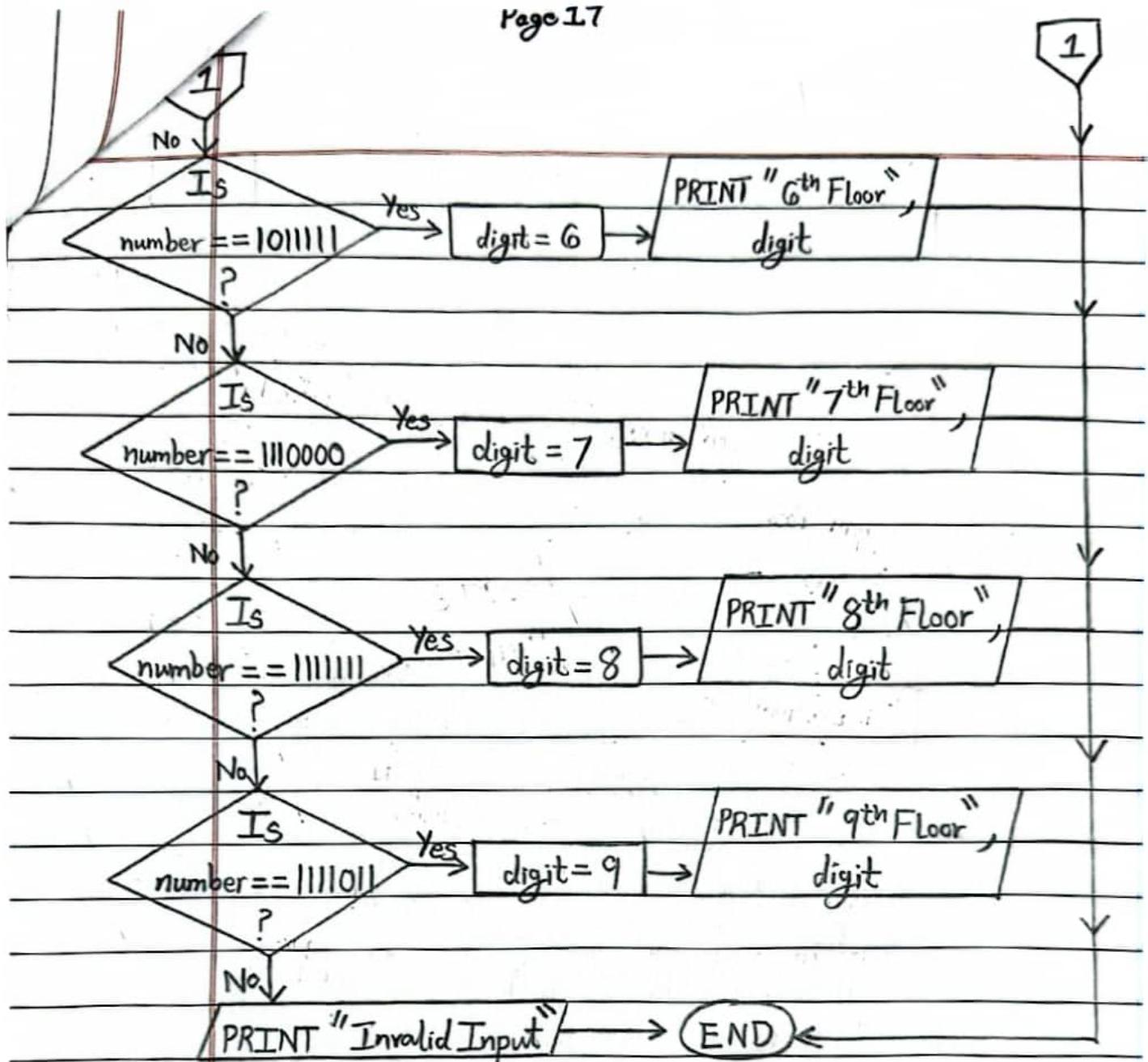
IPO Chart :-

Input	Processing	Module Ref.	Output
* Enter the 7-digit number, comprising of only 1's & 0's	* Check what the 7-digit number is * If the number is 1111110; set digit is equal to 0, print digit and "Ground Floor" * If the number is 0110000; set digit is equal to 1, print digit and "1 <sup>st</sup> Floor" * If the number is 1101101; set digit is equal to 2, print digit and "2 <sup>nd</sup> Floor" * If the number is 1111001; set digit is equal to 3, print digit and "3 <sup>rd</sup> Floor" * If the number is 0110011; set digit is equal to 4, print digit and "4 <sup>th</sup> Floor" * If the number is 1011011; set digit is equal to 5, print digit and "5 <sup>th</sup> Floor" * If the number is 1011111; set digit is equal to 6, print digit and "6 <sup>th</sup> Floor" * If the number is 1110000; set digit is equal to 7, print digit and "7 <sup>th</sup> Floor" * If the number is 1111111; set digit is equal to 8, print digit and "8 <sup>th</sup> Floor" * If the number is 1111011; set digit is equal to 9, print digit and "9 <sup>th</sup> Floor"	* READ * Selection Statement * PRINT	* "Ground Floor" and 1111110 * "1 <sup>st</sup> Floor" and digit if number is 0110000 * "2 <sup>nd</sup> Floor" and digit if number is 1101101 * "3 <sup>rd</sup> Floor" and digit if number is 1111001 * "4 <sup>th</sup> Floor" and digit if number is 0110011 * "5 <sup>th</sup> Floor" and digit if number is 1011011 * "6 <sup>th</sup> Floor" and digit if number is 1011111 * "7 <sup>th</sup> Floor" and digit if number is 1110000 * "8 <sup>th</sup> Floor" and digit if number is 1111111 * "9 <sup>th</sup> Floor" and digit if number is 1111011
		* "Invalid Input"	for any other number
		input	
		* Else, print "Invalid Input"	

Flowchart:-



1



Ques 8 :-

seudocode :-

START

PRINT " Enter any single integer number: "

INPUT Num

SET Sum = 0

REPEAT

digit = Num % 10

Sum = Sum + digit

Num = Num / 10

UNTIL Num &lt;= 0

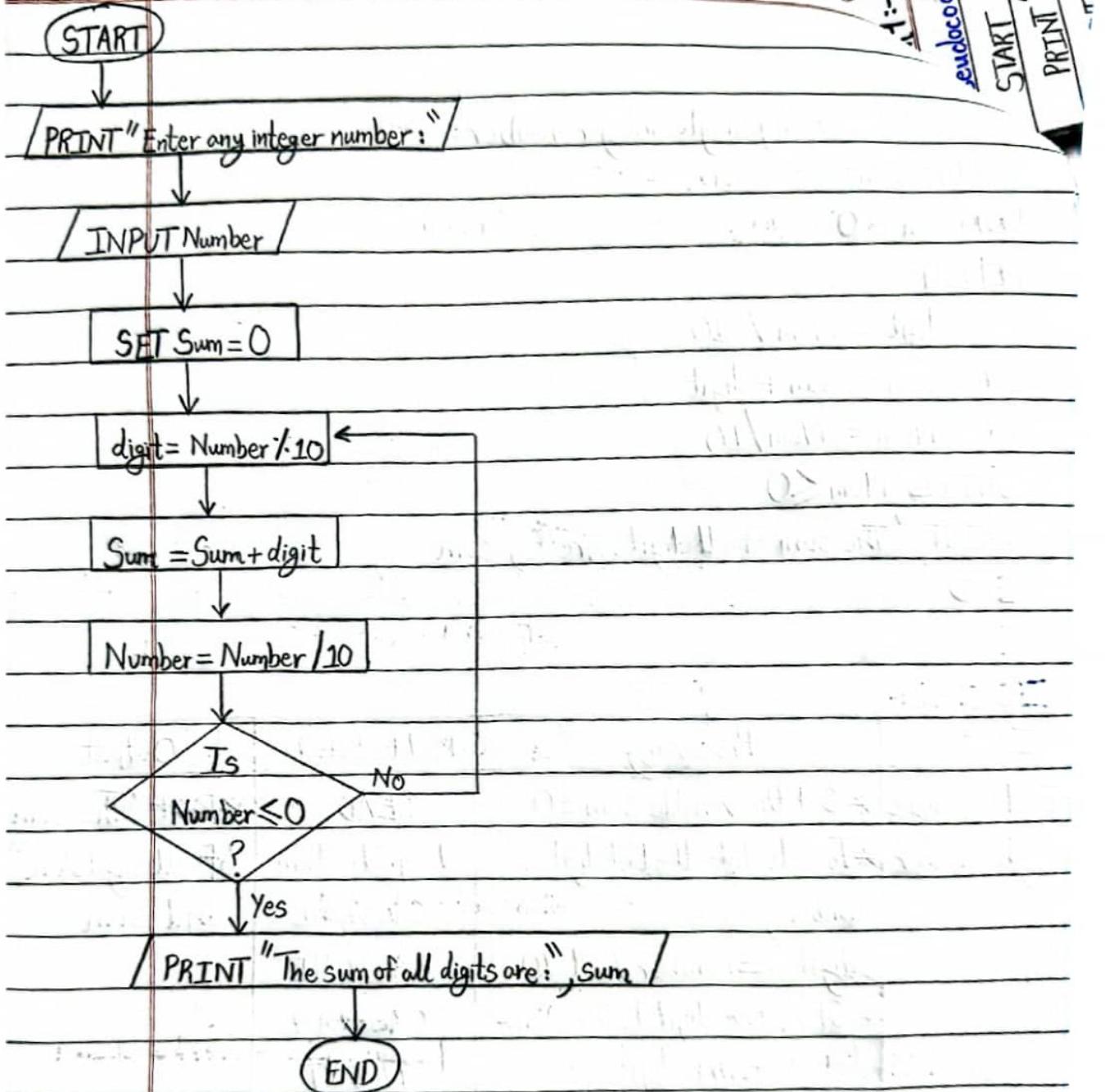
PRINT "The sum of all digits are ", sum

END

IPO Chart :-

Input	Processing	Module Ref.	Output
* Enter a single integer number	* Set the variable sum = 0 * To calculate the last digit of number, use:- $digit = number \bmod 10$ * Store the digit to the sum:- $sum = sum + digit$	READ Loop Structure CALCULATE CALCULATE CALCULATE	* Print "The sum of all digits are and sum
	* Divide the number by 10 to get rid of that digit and store it in the number variable :- $number = number / 10$	CALCULATE	PRINT
	* Repeat step2 until number becomes less than or equals to zero		

Flowchart:-



~~1:-~~  
~~seudocode:-~~  
~~START "Enter the~~  
~~PRINT "sum of digits of a number"~~  
~~END~~

9:-

Pseudocode:-

START

PRINT "Enter the year, month and date of birthday:"

INPUT bd\_year, bd\_month, bd\_date

PRINT "Enter the year, month and date of today:"

INPUT t\_year, t\_month, t\_date

IF bd\_month < 1 OR bd\_month > 12

THEN PRINT "Invalid birthday month"

ENDIF

IF bd\_date > 31 OR bd\_date < 1

THEN PRINT "Invalid birthday date."

ENDIF

IF (bd\_month == 4 OR bd\_month == 6 OR bd\_month == 9 OR bd\_month == 11)

AND bd\_date > 30

THEN PRINT "Invalid birthday date for the mentioned month"

ENDIF

IF bd\_month == 2

THEN IF (bd\_year % 4 == 0 AND bd\_year % 100 != 0) OR (bd\_year % 400 == 0)

AND bd\_date > 29

THEN PRINT "Invalid birthday date for the mentioned month"

ELSE IF (bd\_year % 4 != 0 OR bd\_year % 400 != 0) AND bd\_date > 28

THEN PRINT "Invalid birthday date for the mentioned month"

ENDIF

ENDIF

IF t\_month < 1 OR t\_month > 12

THEN PRINT "Invalid today month"

ENDIF

IF t\_date > 31 OR t\_date < 1

THEN PRINT "Invalid today date"

ENDIF

IF  $t_{month} == 4$  OR  $t_{month} == 6$  OR  $t_{month} == 9$  OR  $t_{month} == 11$

AND  $t_{date} > 30$

THEN PRINT "Invalid today date for mentioned month"

ENDIF

IF  $t_{month} == 2$

THEN IF ( $t_{year} \% 4 == 0$  AND  $t_{year} \% 100 != 0$ ) OR ( $t_{year} \% 400 == 0$ )

AND  $t_{date} > 29$

THEN PRINT "Invalid today date for mentioned month"

ELSE IF ( $t_{year} \% 4 != 0$  OR  $t_{year} \% 400 != 0$ ) AND  $t_{date} > 28$

THEN PRINT "Invalid today date for mentioned month"

ENDIF

ENDIF

years =  $t_{years} - bd_{years}$

IF ( $t_{month} < bd_{month}$ ) OR ( $t_{month} == bd_{month}$  AND  $t_{date} < bd_{date}$ )

THEN years = years - 1

ENDIF

IF  $t_{month} \geq bd_{month}$

months =  $t_{month} - bd_{month}$

ELSE

months =  $(t_{month} + 12) - bd_{month}$

years = years - 1

ENDIF

IF  $t_{date} \geq bd_{date}$

THEN days =  $t_{date} - bd_{date}$

ELSE

days =  $(t_{date} + 30) - bd_{date}$

months = months - 1

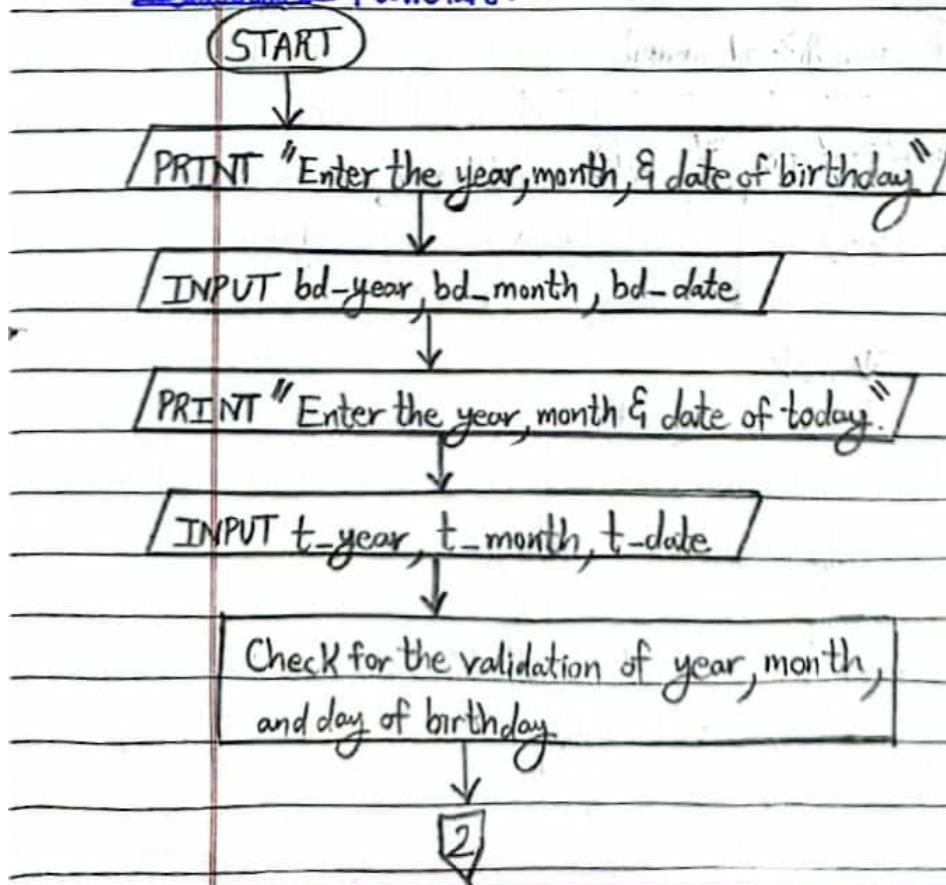
ENDIF

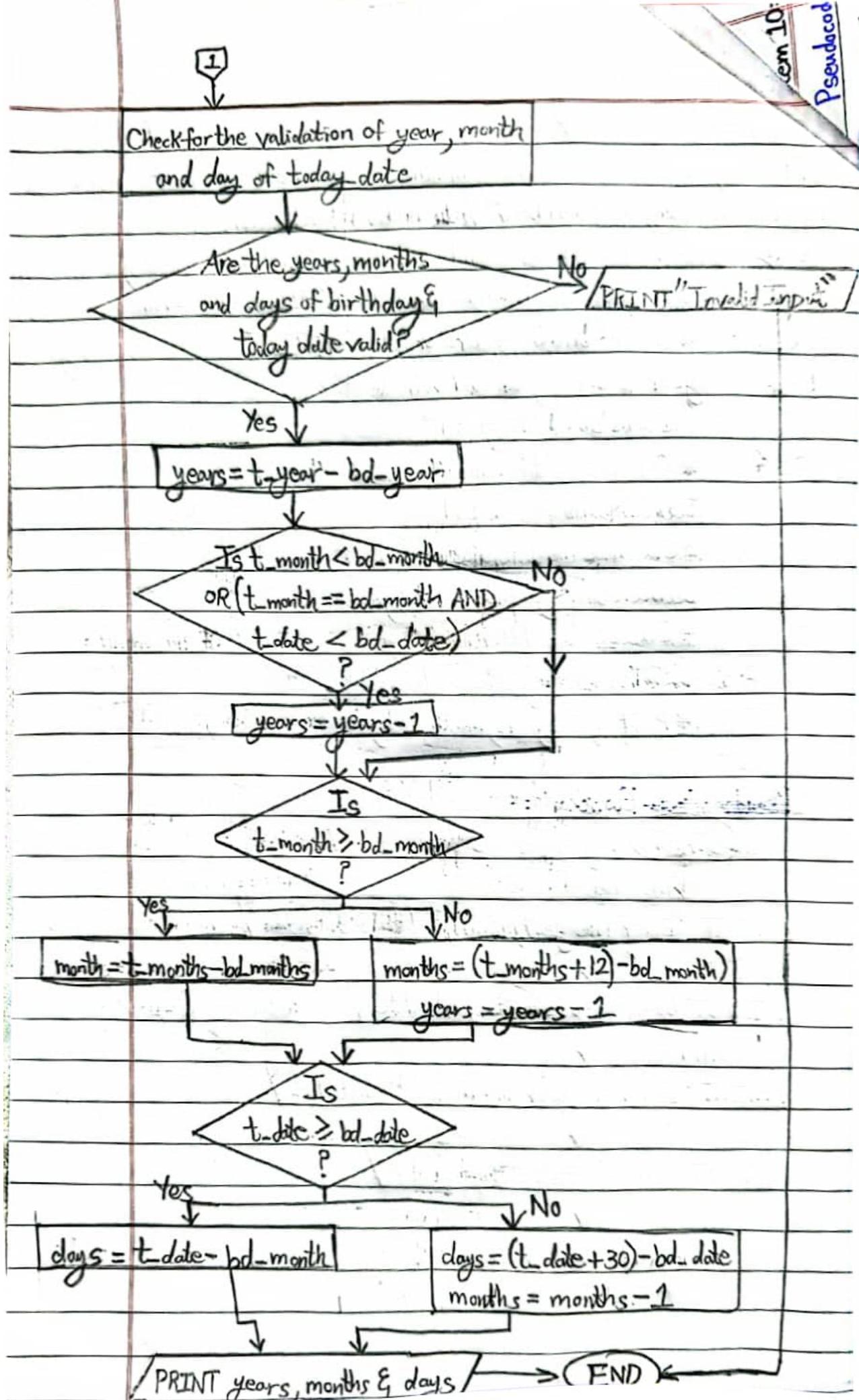
PRINT years, months, days

END

Input	Processing	Module Ref.	Output
* Enter the year, month and date of birthday.	* Check if the birthday month and today month are between 1 and 12. * Check if the day is valid for birth-	* READ * Selection Statement	* For any invalid month or date, display error message.
* Enter the year, month and date of today.	* Check if the day is valid for birth-	* CALCULATE * PRINT	* Print age in years, months & days
	* Check if birthday year or today year is a leap year and validate the date accordingly.		
	* Calculate the difference in years between birthday year and today year.		
	* Calculate the difference in months between birthday month and today month.		
	* Calculate the difference in days between birthday date and today date.		
	* Print age as years, months & days.		

### Flowchart :-





Pseudocode :-

START

PRINT "Enter Number:"

INPUT Number

Corrected\_Number = 0

Multiplier = 0

WHILE Number > 0

Last\_digit = Number MOD 10

second\_last\_digit = (Number / 10) MOD 10

IF last\_digit == 0 AND second\_last\_digit == 9

THEN Corrected\_Number = Corrected\_Number + (9 \* Multiplier)

Number = Number DIV 100

Multiplier = Multiplier \* 10

ELSE

Corrected\_Number = Corrected\_Number + (last\_digit \* Multiplier)

Number = Number DIV 10

Multiplier = Multiplier \* 10

ENDIF

final\_number = 0

WHILE Corrected\_Number > 0

Power = 0

Last\_digit = Corrected\_Number MOD 10

final\_number = final\_number + (Last\_digit \* (10^Power))

Power = Power + 1

Corrected\_Number = Corrected\_Number / 10

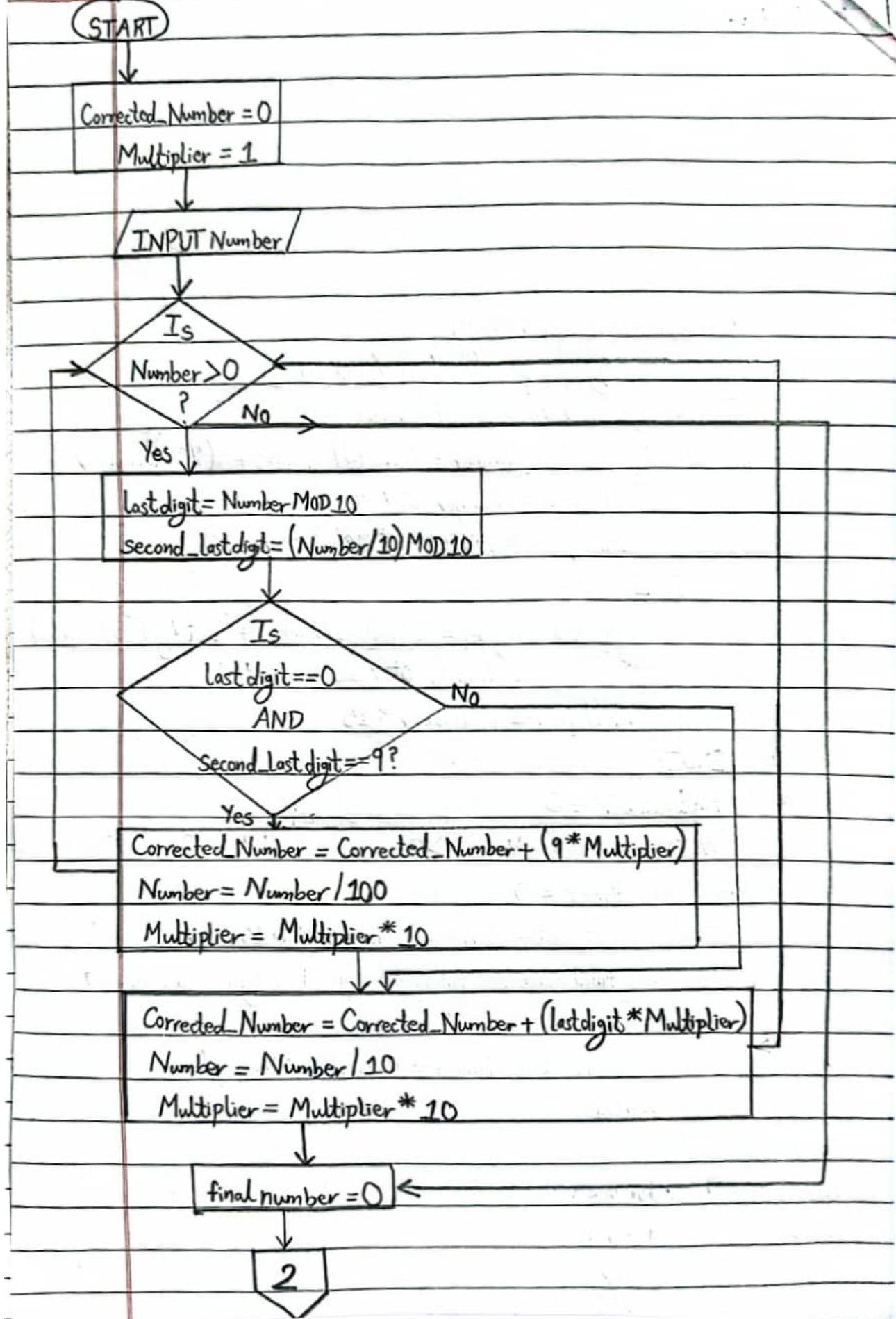
END WHILE

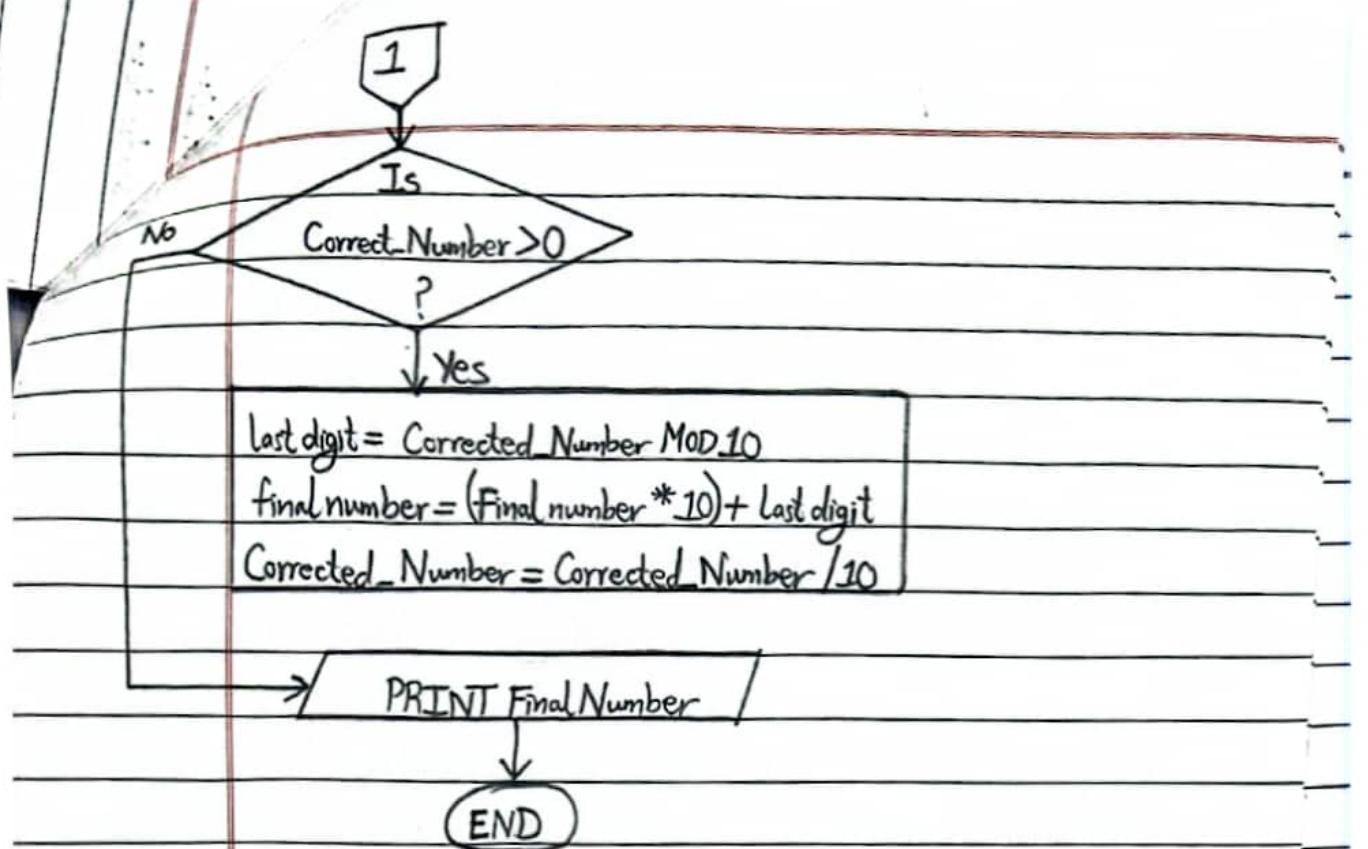
END WHILE

PRINT final\_number

END

Flowchart:-





IPO Chart:-

INPUT	Processing	Module Ref	OUTPUT
* Enter number	<ul style="list-style-type: none"> <li>* Corrected Number = 0 , Multiplier = 1</li> <li>* While Number &gt; 0           <ul style="list-style-type: none"> <li>• lastdigit = Number mod 10</li> <li>• second_lastdigit = (Number / 10) MOD 10</li> <li>• IF lastdigit == 0 AND second_lastdigit == 9 * PRINT</li> <li>• Corrected Number = Corrected Number + (9 * Multiplier)</li> <li>• Number = Number DIV 100</li> <li>• Multiplier = Multiplier * 10</li> <li>• Else, Corrected Number = Corrected Number + (lastdigit * Multiplier)</li> <li>• Number = Number DIV 10</li> <li>• Multiplier = Multiplier * 10</li> <li>• finalnumber = 0</li> <li>• While Corrected Number &gt; 0               <ul style="list-style-type: none"> <li>• lastdigit = Corrected Number MOD 10</li> <li>• final number = final number * (10 + digit)</li> <li>• Corrected Number = Corrected Number DIV 10</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>* READ</li> <li>* Loop Structure Statement</li> <li>* Selection Statement</li> <li>* PRINT</li> </ul>	* PRINT final number.

START  
 PRINT "Enter the larger number"  
 INPUT Num1  
 PRINT "Enter the smaller number"  
 INPUT Num2  
 IF Num1 != 0 AND Num2 != 0 AND Num1 > Num2  
 THEN REPEAT  
     rem = Num1 % Num2  
     Num1 = Num2  
     Num2 = rem  
 UNTIL Num2 == 0  
 IF Num1 == 1  
 THEN PRINT "The two numbers are co-prime."  
 ELSE  
     PRINT "The two numbers are not co-prime."  
 ENDIF  
 ELSE  
     PRINT "Invalid Input"  
 END

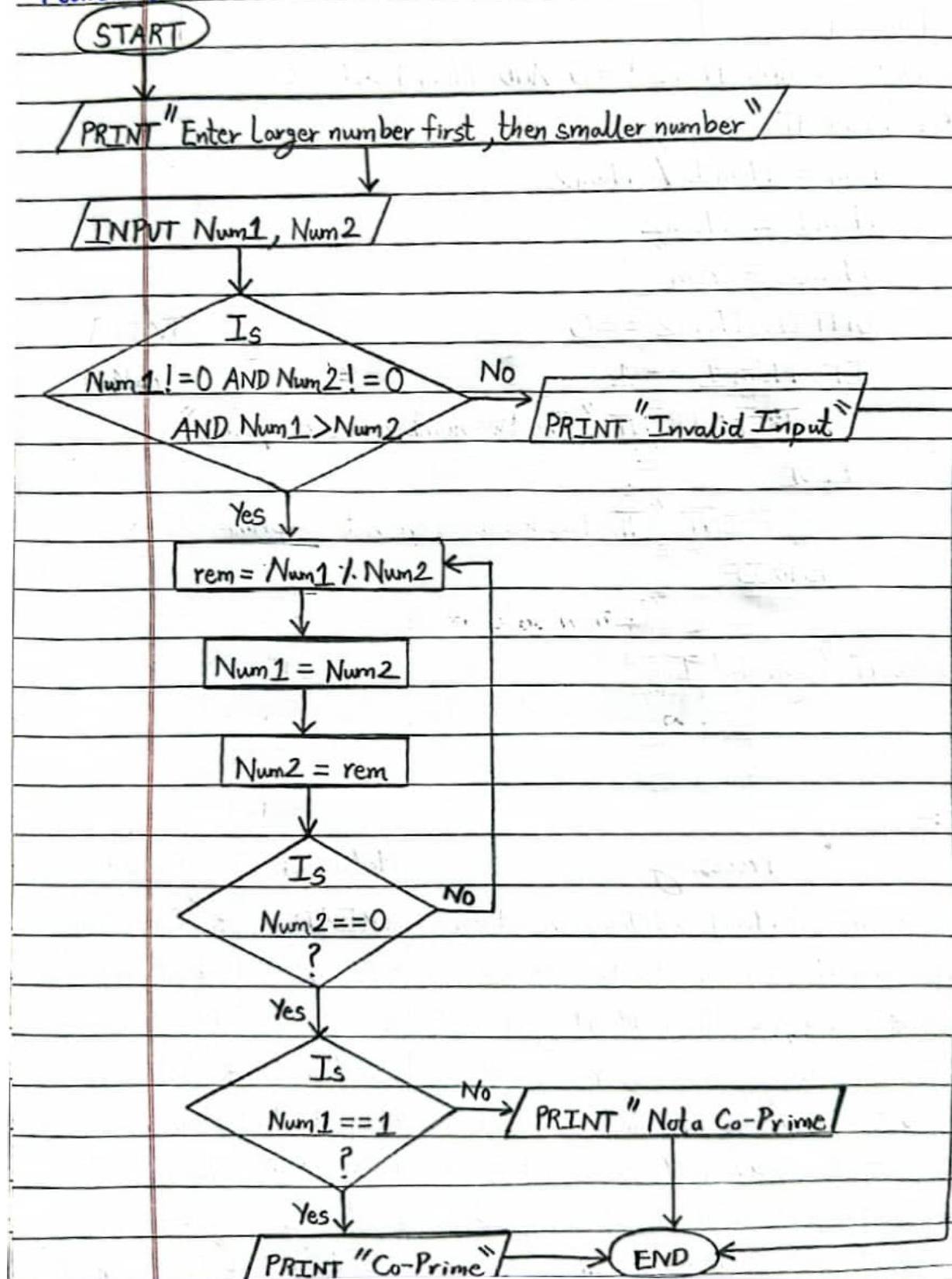
### IPO Chart :-

Input	Processing	Module Ref.	Output
*Enter the larger number as Num1	*Check if Num1 and Num2 are not zero and Num1 is greater than Num2	*READ	*"Co-prime"
*Enter the smaller number as Num2	*If true, then divide Num1 by Num2 & store the remainder as rem variable	*READ *Selection Statement	when Num2 and Num1 are co-prime. "Not co-prime"
	- Store Num2 in Num1 variable - Store rem in Num2 variable - Repeat until Num2 becomes zero - Check if Num1 is one	*Loop Structure *CALCULATE *Selection Statement	when Num2 and Num1 are not co-prime "co-prime" "Invalid input"

- If true, print "Co-prime"  
 - Else, print "Not co-prime"  
 \* Else, print "Invalid Input"

\* PRINT if either Num1 or Num2  
 is zero or Num1 is not  
 greater than Num2

Flowchart:-



item 12 :-

Pseudocode :-

START

INPUT 5L jug, 3L jug

INPUT water in 5L jug

transfer the water into the 3L jug

empty the 3L jug

transfer the remaining 2L of water of 5L jug into 3L jug

INPUT refill the 5L jug

transfer water from 5L jug to 3L jug

PRINT "4L of water in 5L jug."

END

IPO Chart :-

Input	Processing	Module Ref.	Output
* Input water in 5L jug.	* Input water in 5L jug.	* READ	* "4L of water"
5L jug.	* Transfer the water to 3L jug	* READ	in 5L jug"
* Refill water in 5L jug	* Empty the 3L jug.	* PRINT	
Read 5L jug & 3L jug	* Transfer the remaining 2L of water of 5L jug in 3L jug		
	* Refill the 5L jug.		
	* Transfer water from 5L jug to 3L jug.		
	* Print 4L water remaining in 5L jug.		

Flowchart :-

START

↓

/ INPUT 5L jug, 3L jug /

↓

/ INPUT water in 5L jug /

↓

2

1

transfer the water to 3L jug

empty the 3L jug

transfer the remaining 2L of water of 5L jug to 3L jug

INPUT refill the 5L jug with water

/ transfer water from 5L jug to 3L jug /

/ PRINT " 4L of water remaining in 5L jug "

END

Problem 13:-

Pseudocode:-

START

PRINT "What litres of jugs are to be used ?"

INPUT M , N

PRINT " How much litres of water is needed ? "

INPUT x

$$\text{Avg.} = \frac{M+N}{2}$$

If  $x == \text{Avg.}$ 

THEN INPUT water in N-L of jug

transfer the water from N-L jug to M-L jug

empty the M-L jug

transfer the remaining water of N-L jug to M-L jug

INPUT refill the N-L jug with water

transfer the water from N-L jug to M-L jug

PRINT " x litres of water remaining in N-L jug "

ELSE

PRINT "Not Possible"

END

Flowchart:-

START

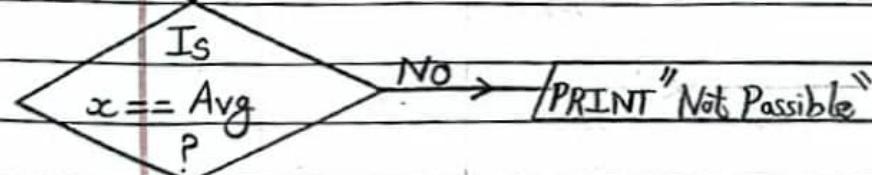
PRINT "Enter the litres of jugs we have:"

INPUT M-L jug, N-L jug

PRINT "Enter the litres of water needed:"

INPUT x

$$\text{Avg} = \frac{(M+N)}{2}$$



INPUT water in N-L jug

transfer the water from N-L jug to M-L jug

empty the M-L jug

transfer the remaining water of N-L jug to M-L jug

INPUT refill the N-L jug with water

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↓  
transfer the water from N-L jug to M-L jug

PRINT "x litres of water remaining in N-L jug"

↓  
END <

### IPO chart

Input	Processing	Module Ref.	Output
* Enter the size of N-L & M-L jugs	* Calculate the average of N-L & M-L jugs	* READ	* PRINT "x litres
* Enter the litres of water needed	* If average is equal to x litres needed • Then, input water in N-L jug • Transfer the water from N-L jug to M-L jug	* Selection Statement	of water remaining in N-L jug
* Input water in N-L jug	• Empty the M-L jug	* READ	* "Not possible" if x litres is not equal to average
* Input refill water in N-L jug	• Transfer the remaining water of N-L jug to M-L jug	* PRINT	
	• Refill the N-L jug with water		
	• Transfer the water from N-L jug to M-L jug		
	• Print x litres water remaining in N-L jug		
	* Else, print "Not possible"		