ELECTRIC BILLING

AIM :

To draw flowchart and write algorithm for the following problem .

ALGORITHM :

Step 1 : start

Step 2 : Get number of unit consumed as N

Step 3 : check condition if n<=100

3.1 : if the condition is true , display no. current charge else go to step 4

Step 4 : check condition is n<=200

4.1 : if the condition is true , for 100 units no charge and to calculate energy charge for remaining units use formula 1.5*(N-100)

4.2 : The total charge is calculated by adding energy charge , duty charge and fixed charge

4.3 : Display current bill

Step 5 : Check condition if n <= 500

5.1 : If condition is true , for 100 units no charge

5.2 : For units 101 to 500 energy charge is calculated in step 2

5.2.1: for 101 – 200 units , energy charge 1 = 100*2 = 200

5.2.2: for remaining units calculate energy charge 2 for remaining units will be (N – 200)*3

5.3 : Total energy charge is calculated by adding 5.2.1 and 5.2.1

5.4 : The total charge is calculated by adding energy charge , duty charge and fixed charge

5.5 : Display current bill for the month in step 5.4.

Step 6 : check condition if n >500

6.1 : If condition is true , for 100 units no charge

6.2 : For units 101 , energy charge is calculate in 3 steps

6.2.1 : for 101 – 200 units energy charge 1 = 100*3 , 5=350

6.2.2 : for 201 – 500 units energy charge 1 = 300*4 , 6

6.2.3 : For remaining units calculate energy charge 2 for remaining units will be (N-500)*6,6

6.3 : Total energy charge is calculated by adding 6.2.1 , 6.2.2 , 6.2.3

6.4 : The total charge is calculated by adding energy charge , duty charge and fixed charge .

6.5 : Display current bill for the month in step 4.

Step 7 : Stop.

PSEUDO CODE :

BEGIN

GET number of unit consumed as N

IF n<=100

DISPLAY no. current charge

IF n<=200

Display current bill

IF n <= 500

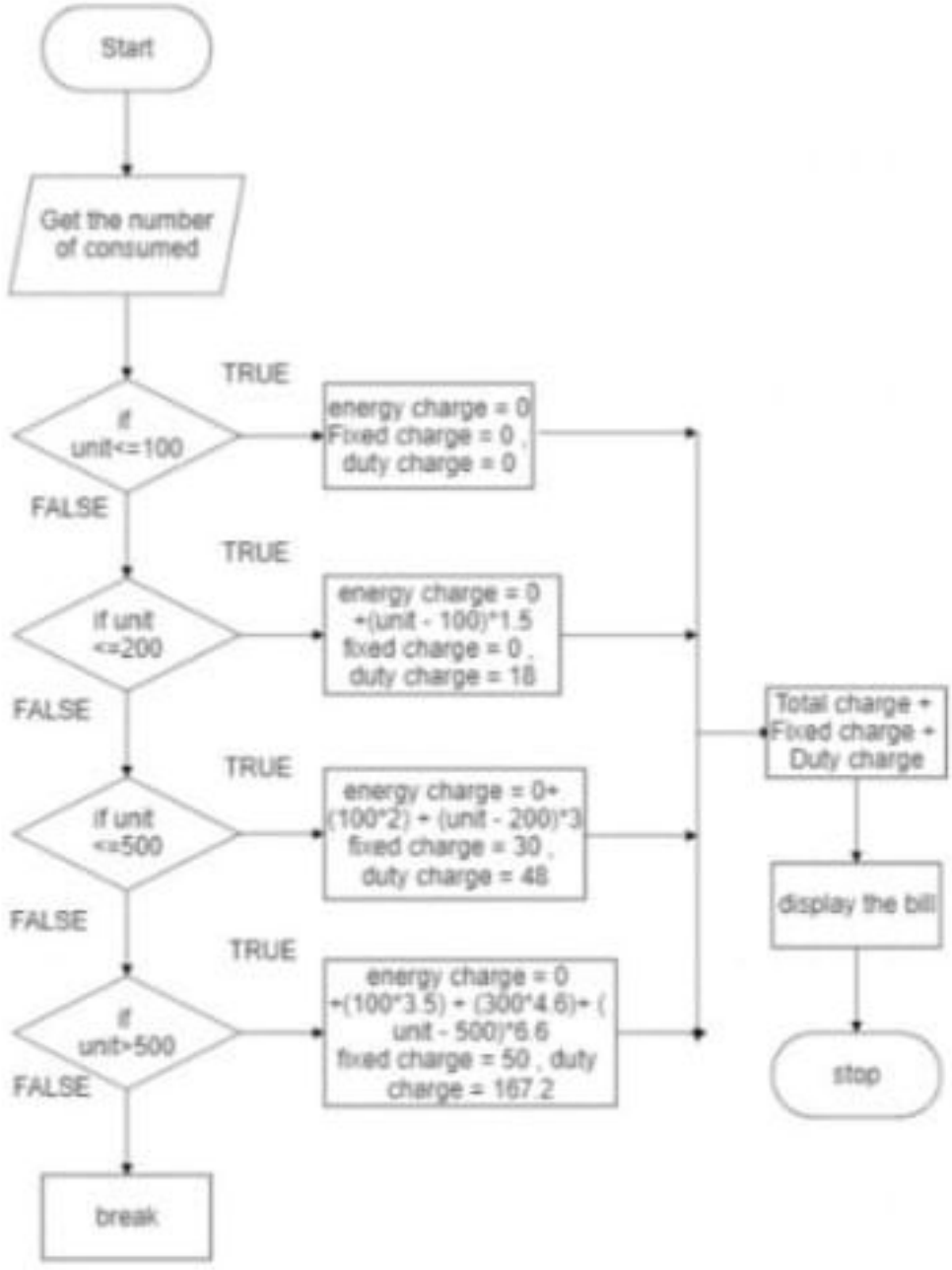
Display current bill for the month

IF n >500

END IF

END

FLOWCHART :



RESULT :

Thus the algorithm and flowchart is written for the given problem.

RETAIL SHOP BILLING

AIM :

To draw flowchart and write algorithm for the following .

ALGORITHM :

Step 1 : Start

Step 2 : Read the value bill number and bill date

Step 3 : Get details of customers : Name , address and mobile

Step 4 : Get the number of items purchased as n

Step 5 : Initialize i = 0 , total = 0

Step 6 : Check condition i<=n :

6.1 : If true get items details like Name , price , count and discount

i) calculate subtotal = count * price – Disc./100

ii) Add the value of subtotal to the total

iii) Increment the value of I by 1

6.2 : If condition is false , get the value of GST

i) calculate total Bill = total + GST / 100

ii) Display Total_Bill

Step 7 : Stop

PSEUDO CODE :

BEGIN

READ the value

GET details of customers and the number of items purchased as n

INITIALIZE i = 0 , total = 0

CHECK condition i<=n :

IF TRUE

GET items details

CALCULATE and add the value of subtotal to the total

INCREMENT the value

ELSE

CONDITION is false , get the value of GST

CALCULATE total Bill

DISPLAY Total_Bill

END IF

END

FLOWCHART :

RESULT :

Thus the algorithm and flowchart is written for the given problem.

SINE SERIES

AIM :

To draw flowchart and write algorithm for the following .

ALGORITHM :

Step 1 : Start

Step 2 : Get the value of X

Step 3 : Initialize the value of i = 1 , sine = 0 and import math

Step 4 : Get the value of N

Step 5 : Check the value of i is less than N :

5.1 : If the condition is T , convert x to radian and adding it to y.

5.1.1 : Let the value of S be -1 to the power i

5.1.2 : Now calculate sine series using formula

Sine = sine + [y*2*i+1] / math. Factorial (2*i+1)*s

5.1.3 : Increment value of i by 1

5.2 : If condition is false , display sine

Step 6 : Stop.

PSEUDO CODE :

BEGIN

GET the value of X

INITIALIZE the value of i = 1 , sine = 0 and import math

GET the value of N

CHECK the value of i is less than N :

IF

The condition is true , convert x to radian and adding it to y.

Let the value of S be −1 to the power i

Now calculate sine series

Increment value of i by 1

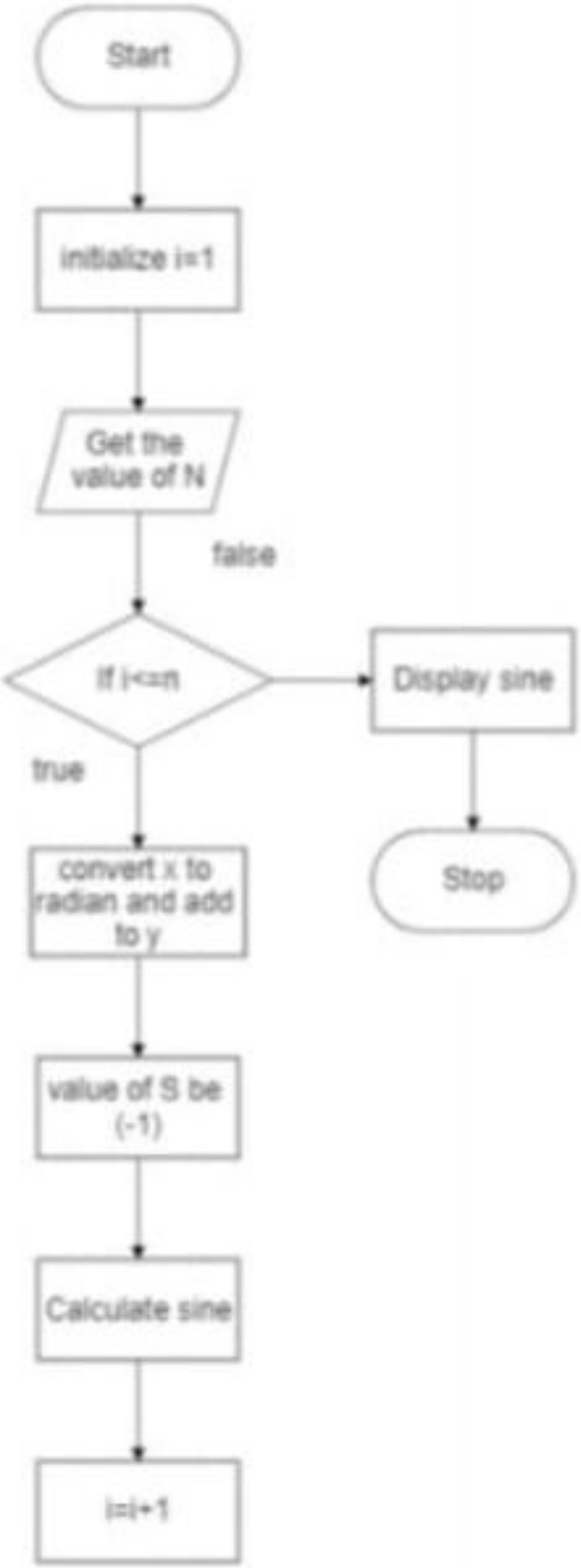
ELSE

Condition is false , display sine

END IF

END

FLOWCHART :



RESULT :

Thus the algorithm and flowchart is written for the given problem.

WEIGHT OF MOTOR BIKE

AIM :

To draw flowchart and write algorithm for the following problem .

ALGORITHM :

Step 1 : start

Step 2 : Get the gross vehicle weight rating of the particular vehicle in a variable " GVWR "

Step 3 : Get the dry weight in a variable " DW "

Step 4 : Get the fuel weight in a variable " FW "

Step 5 : Get the rider weight in a variable " RW "

Step 6 : Get the passenger weight in a variable " PW "

Step 7 : calculate the total weight of the variable by adding DW , FW , RW AND PW.

Step 8 : Get the load weight in a variable load

Step 9 : calculate the load weight of the vehicle by adding the total weight with the load .

Step 10 : Now calculate the safe weight for the ride by subtracting the total vehicle weight from the GVWR.

Step 11 : Check the condition if the safe weight is greater than or equal to zero.

11.1 : If the message is true , the display the message " You are appreciated for safe and happy journey " .

11.2 : If the condition is false then ask the rider to reduce the load by generating the message " For safe journey reduce the weight for better suspension " .

Step 12 : Stop.

FLOWCHART :

PSEUDO CODE :

BEGIN

GET the variables

CALCULATE the total weight of the variable

GET the load weight in a variable load

CALCULATE the load weight .

CHECK the safe weight is greater than or equal to zero.

IF

The message is true , the display the message .

ELSE

The condition is false then generating the message

END IF

END

RESULT :

Thus the algorithm and flowchart is written for the given problem.

WEIGHT OF THE STEEL ROD

AIM :

To draw flowchart and write algorithm for the following problem .

ALGORITHM :

Step 1 : Start

Step 2 : Get the number of steel rods required as n

Step 3 : Initialize I = 0 and total = 0

Step 4 : Check if the value of I is less than n

4.1 : If the condition is true , get the diameter of the rod D

4.1.1 : Calculate unit weight using formula D**2/162

4.1.2 : Get number of rods with diameter D

4.1.3 : Calculate weight of rod using formula No. of rod *D* unit weight

4.1.4 : Add this weight to total

4.1.5 : Increment value of I by 1

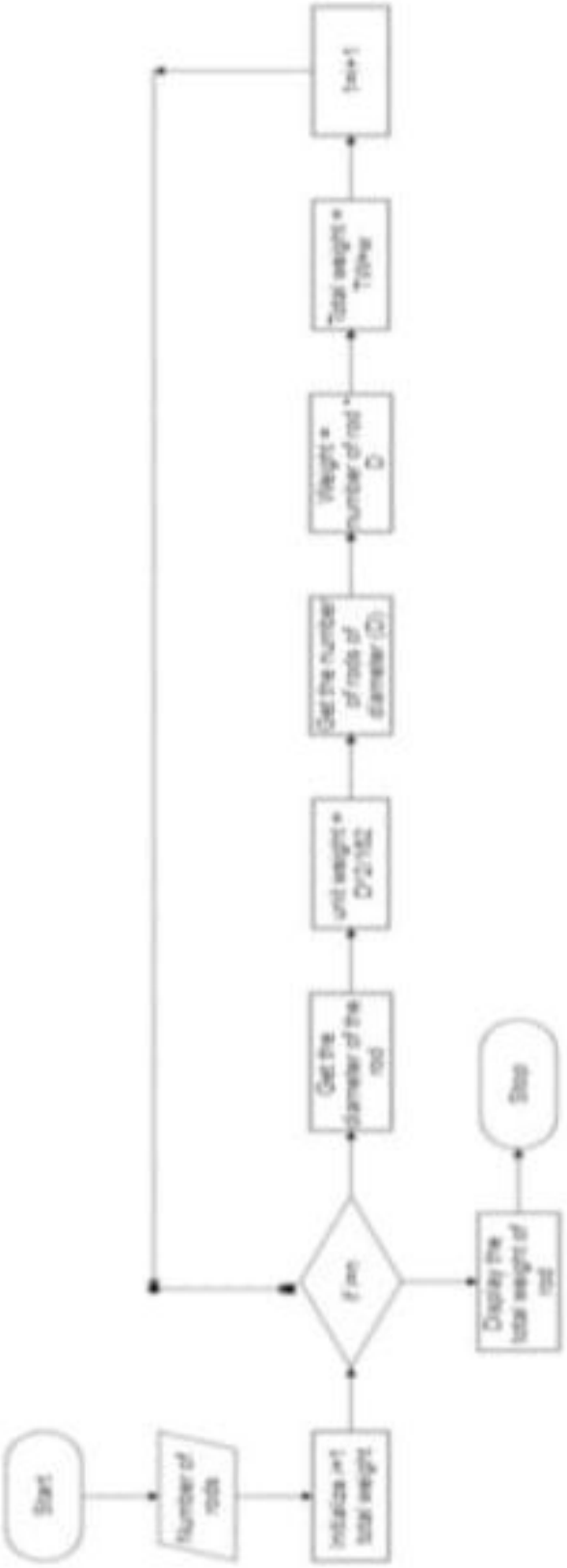
4.2 : If condition is false , Display total as total weight of rod

Step 5 : Stop.

PSEUDO CODE :

BEGIN
GET the number of steel rods
INITIALIZE i = 0 and total = 0
IF
CHECK i < n
The condition is true , get the diameter
CALCULATE unit weight
GET number of rods
CALCULATE weight of rod
ADD this weight to total
INCREMENT value of i by 1
ELSE
CONDITION is false , Display total weight of rod
END IF
END

FLOWCHART :



RESULT :

Thus the algorithm and flowchart is written for the given problem.

CALCULATE ELECTRIC CURRENT IS 3 PHASE AC CIRCUTE

AIM :

To draw flowchart and write algorithm for the following.

ALGORITHM :

Step 1 : start

Step 2 : Read the value of pf , I and V

Step 3 : Calculate P using the formula P = root of 3 * pf * I*V

Step 4 : Display " the result is P "

Step 5 : Stop .

FLOWCHART :

PSEUDO CODE :

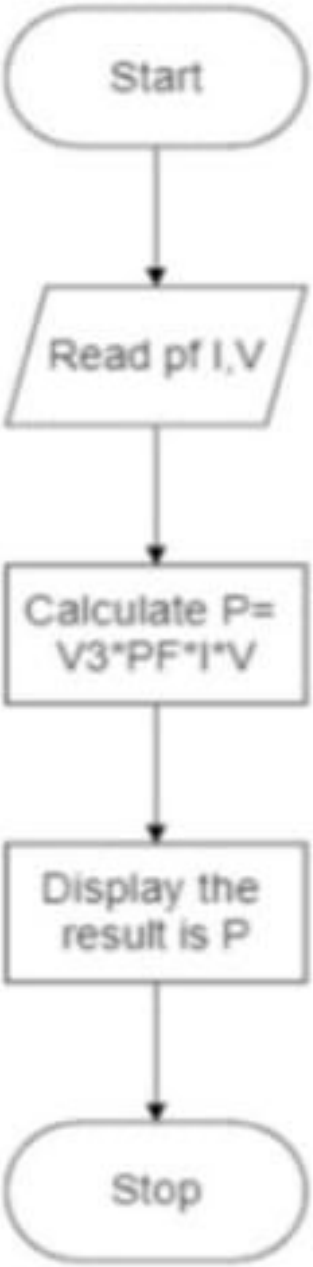
BEGIN

Read the value of pf , I and V

Calculate P

Display " the result is P "

END



RESULT :

Thus the algorithm and flowchart is written for the given problem.

STUDENT GRADE ANALYSIS

AIM :

To draw flowchart and write algorithm for the following problem.

ALGORITHM:

Step 1 : start

Step 2 : Get the marks m1 , m2 ,m3

Step 3 : Calculate total

Step 4 : Calculate average

Step 5 : Check for condition avg.>=30 and avg <50

5.1: If condition is True display the message " Your grade is C "

Step 6 : Check for condition avg>50 and avg<80

6.1 : If condition is True display the message " Your grade is B"

Step 7 : Check for the condition avg>80 and avg<=100

7.1 : If condition is True display the message " Your grade is A"

Step 8 : Check for condition avg <30

8.1 : If condition is True display the message " Your grade is D"

Step 9 : Stop.

PSEUDO CODE :

BEGIN

GET the marks

CALCULATE total and average

IF

avg.>=30 and avg <50

DISPLAY the message " your grade is C "

IF

avg>50 and avg<80

DISPLAY the message " your grade is B "

IF

avg>80 and avg<=100

IF

DISPLAY the message " your grade is A "

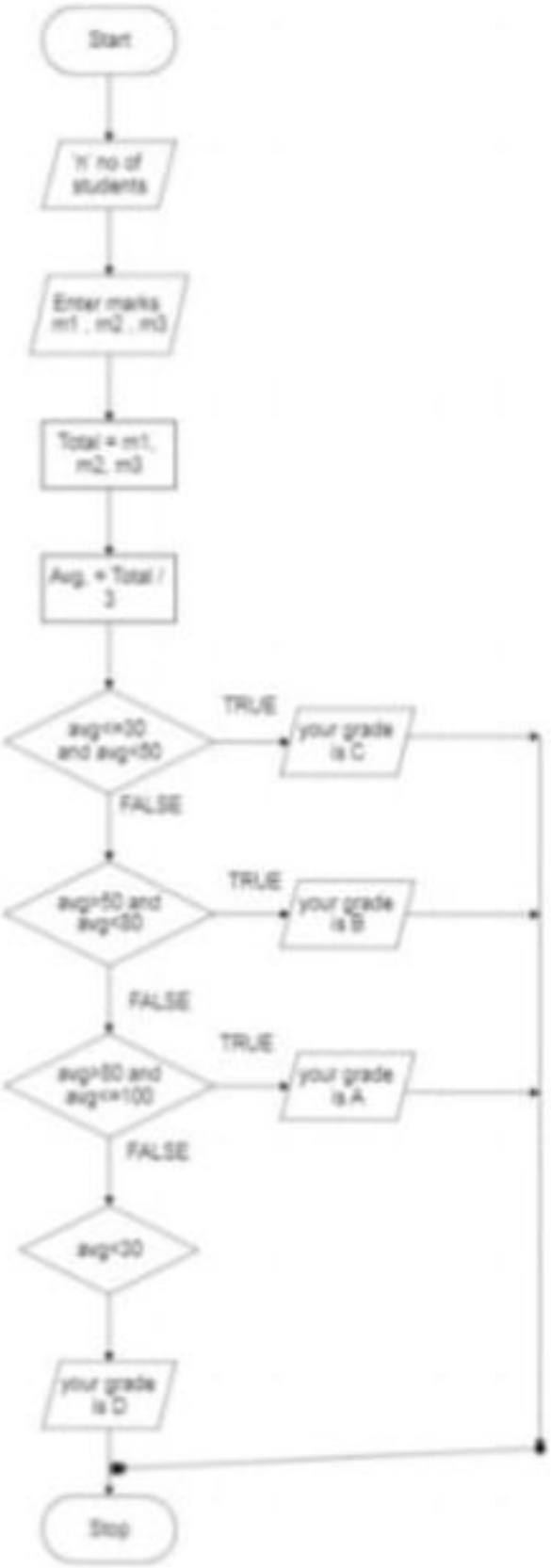
IF avg <30

DISPLAY the message " your grade is D "

END IF

END

FLOWCHART:



RESULT :

Thus the algorithm and flowchart is written for the given problem.