EXPT. NO. 1.a ELECTRICITY BILL CALCULATION

FLOWCHART:

Total amount = amount +FC + DC

Stop

Print Total amount

If Unit >400

amount=((Unit-100)\*1.5) + ((Unit-200)\*3.5), DC= 48, FC=30

If Unit>200 && Unit<=400

amount=((Unit-100)\*1.5), DC=18, FC=20

If Unit>100 && Unit<=200

amount=0, DC=0, FC=0

If Unit<=100

Unit = current unit- previous month unit

Read the value of current unit, previous month unit

Start

true

false

true

false

true

false

amount=((Unit-100)\*1.5)+((Unit-200)\*3.5)+((Unit-400)\*4.5),DC=100,FC=75

true

false

AIM:

To write an algorithm, pseudo code and draw flow chart for electricity bill calculation.

ALGORITHM:

STEP-1: Start

STEP-2: Read the value of current unit, previous month unit

STEP-3: Unit= current unit- previous month unit

STEP-4: check if Unit <=100

STEP-4.1: if true , amount =0, DC=0, FC=0 else goto step-5

STEP-5: check if unit >100 and unit <=200

STEP-5.1: if true ,amount =((Unit-100)\*1.5), DC=18, FC=20

STEP-5.2: if false goto step-6

STEP-6: check if Unit >200 and Unit <=400

STEP-6.1: If true, amount=((Unit-100)\*1.5) + ((Unit-200)\*3.5), DC= 48, FC=30 else goto step-7

STEP-7: check if Unit >400

STEP-7.1: if true, amount =((Unit-100)\*1.5) +((Unit-200)\*3.5) + ((Unit-400)\*4.5), DC=100, FC=75

STEP-7.2: if false, Total amount = amount +FC +DC and print Total amount

STEP-9: Stop

PSEUDO CODE:

BEGIN

READ The current unit, previous month unit

COMPUTE Unit= current unit- previous month unit

IF (Unit <=100) THEN

amount=0, DC=0, FC=0

Elif ( Unit>100 && Unit<=200)

amount=((Unit-100)\*1.5), DC=18, FC=20

Elif (unit>200 && unit<=400)

amount=((Unit-100)\*1.5) +((Unit-200)\*3.5), DC=48, FC=30

Elif (unit >400)

amount =((Unit-100)\*1.5 )+((Unit-200)\*3.5) + ((Unit-400)\*4.5), DC=100, FC=75

ELSE

Total amount = amount +DC+FC

Print Total amount

END

RESULT:

The algorithm, flow chart and pseudo code is written for electricity bill calculation.

EXPT. NO. 1.b RETAIL SHOP BILLING

FLOWCHART:

i = i+1

Total= total+ Discount total

Stop

Print Total

Discount total = Sub total \* discount/100

Enter the discount of the items (discount)

Subtotal = number of items \* unit price

Get the item unit price, number of items

If i <=n

Initialize i=1, total=0, Subtotal=0

Read total number of items purchased ‘n’

Start

false

true

AIM:

To write an algorithm , pseudo code and draw flow chart for Retail bill shopping process.

ALGORITHM:

STEP-1: Start

STEP-2: Get the total number of items purchased (n)

STEP-3: Initialize i=1, total=0, Sub total=0

STEP-4: Check if i<=n

STEP-5: If true, get the unit price and number of items purchased

STEP-6: Sub total= number of items \* unit price

STEP-7: Get the discount of the items (discount)

STEP-8: Discount total= Sub total \* discount /100

STEP-9: Total= total + Discount total

STEP-10: increment i value by 1 and goto step 4

STEP-11: if the condition is false, print Total

STEP-12: Stop

PSEUDO CODE:

BEGIN

READ The total number of items purchased (n)

INITIALIZE i=1, total=0, Sub total=0

FOR (i<=n) DO

READ The item unit price, number of items

COMPUTE Sub total= number of items \* unit price

GET The discount of the items

COMPUTE Discount total = Sub total \* discount/100

Total= total + Discount total

i=i+1

END FOR

Print Total

END

RESULT:

The algorithm, flow chart and pseudo code is written for Retail bill shopping process.

EXPT. NO. 1.c WEIGHT OF A MOTORBIKE

FLOWCHART:

Stop

For safe journey reduce the weight for better suspension

Print you are appreciated for safe load and Happy journey

If Safe weight >=0

Safe weight= GVWR - Load \_weight

Load\_ weight = Total weight + load

Get load

Total weight = DW + FW + RW + PW

Get the passenger weight PW

Get the rider weight RW

Get fuel weight FW

Get dry weight DW

Get gross weight rating of vehicle GVWR

Start

true

false

AIM:

TO write an algorithm, flow chart and pseudo code for calculating the weight of the motorbike.

ALGORITHM:

STEP-1: Start

STEP-2: Get the gross vehicle weight rating of vehicle “GVWR”

STEP-3: Get the dry weight of vehicle as “DW”

STEP-4: Get the fuel weight of vehicle as “FW”

STEP-5: Get the rider weight as “RW”

STEP-6: Get the passenger weight as “PW”

STEP-7: Calculate Total weight of the vehicle by adding dry weight, fuel weight, rider weight and passenger weight.

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 with load

STEP-10: Now, calculate Safe weight for the ride by subtracting the Load\_ weight from GVWR.

STEP-11: Check if Safe weight>=0

STEP-11.1: If true, then display, “you are appreciated for safe load Happy journey”

STEP-11.2: If false, then ask the rider to reduce the load by displaying “For safe journey reduce weight for better suspension”and goto step 8

PSEUDO CODE:

BEGIN

READ The gross vehicle weight rating of vehicle as “GVWR”, the fuel weight of vehicle as ”FW”, the rider weight as “RW”, the passenger weight as “PW”

COMPUTE Total weight of the vehicle by adding dry weight, fuel weight, rider weight and passenger weight.

READ The load weight in a variable load.

CALCULATE The Load\_weight of the vehicle by adding the Total weight with load.

CALCULATE Safe weight for the ride by subtracting the Load\_weight from GVWR.

IF (safe weight >=0) THEN

Print “you are appreciated for safe load happy journey”

ELSE

Print “Reduce the load weight for better suspension”

END IF

END

RESULT:

The algorithm, flow chart and pseudo code is written for calculating the weight of the motorbike.

EXPT. NO. 1.d WEIGHT OF THE STEEL BAR

FLOWCHART:

Unit weight = D\*\*2/162

Total weight = total + Unit weight

i=i+1

Get the diameter of the bar (D)

Stop

Print Total weight

If i<=n

Initialize i=1, total=0

Get the number of steel bars (n)

Start

false

true

AIM:

To write an algorithm , pseudo code and draw flow chart for calculating the weight of the steel bar

ALGORITHM:

STEP-1: Start

STEP-2: Get the number of steel bars (n)

STEP-3: Initialize i=1, total=0

STEP-4: check if i<=n

STEP-5: get the diameter of the steel bar (D)

STEP-5.1: If true, Unit weight=D\*\*2/162

STEP-5.2: Total weight= total + Unit weight

STEP-5.3: increment the i value by 1

STEP-6: Repeat step 4 until condition becomes false.

STEP-7: If condition is false, print Total weight

STEP-8: Stop

PSEUDO CODE:

BEGIN

READ The number of steel bars (n)

INITIALIZE i=0, total=0

FOR (i<=n) DO

GET The diameter of the steel bar (D)

Unit weight = D\*\*2/162

Total weight= total + Unit weight

i=i+1

END FOR

PRINT Total weight

END

RESULT:

The algorithm, flow chart and pseudo code is written for calculating the weight of the steel bar

EXPT. NO. 1.e ELECTRICAL CURRENT IN THREE PHASE AC CIRCUIT

FLOWCHART:

Read the value of kilowatt (kw), voltage used(v)

I= (1000\*Kw)/ (1.732\*V)

Print I

Stop

Start

AIM:

To write an algorithm, pseudo code and draw flow chart for calculating electrical current in a three phase AC circuit

ALGORITHM:

STEP-1: Start

STEP-2: Read the values of kilowatt (kw) and voltage used (V)

STEP-3: To find the current (I) calculate I= (1000\*kw)/ (1,732\*V)

STEP-4: Display the I value

STEP-5: Stop

PSEUDO CODE:

BEGIN

READ The values of KW, V\

COMPUTE I=(1000\*KW)/ (1.732\*V)

PRINT I

END

RESULT:

The algorithm, pseudo code and flow chart is written for calculating the electrical current in a three phase AC circuit.

EXPT. NO. 1.f STUDENT GRADE ANALYSIS

FLOWCHART:

If Avg >=70 && Avg<80

If Avg>=80 && Avg<90

If Avg >=90

Print grade D

Stop

i=i+1

Print grade C

Print grade B

Print grade A

Average mark (Avg)= Total mark /n

Total mark = m1+m2+……+mn

Read the marks in ‘n’ subjects and get the student name

i<=N

Initialize i=1

Get the number of students N

Start

false

true

true

false

true

false

true

false

Print the total mark and name of student

AIM:

To write an algorithm, pseudo code and draw flow chart for student grade analysis ALGORITHM:

STEP-1: Start

STEP-2: Get the number of students N

STEP-3: INITIALIZE i=1

STEP-4: Check i<=N

STEP-4.1: If true, Read the marks in ‘n’ subjects and get student name

STEP-5: Total mark = m1+m2+……..+mn

STEP-6: Average mark (Avg)=Total mark/n

STEP-7: check if Avg >=90

STEP-7.1: If true, print grade A

STEP-7.2: else check if Avg >=80 and Avg <90

STEP-7.2.1: If true, print grade B

STEP-7.2.2: else check if Avg >=70 and Avg <80

STEP-7.2.2.1: If true, print grade C

STEP-8: If false, print grade D

STEP-9: print the Total mark and student name

STEP-10: increment i value by 1 and goto step 4

STEP-11: if the condition in step 4 becomes false stop

STEP-12: Stop

PSEUDO CODE:

BEGIN

READ The number of students N

INITIALIZE i=1

FOR(i<=N)

READ The marks in ‘n’ subjects and GET student name

COMPUTE Total mark =m1+m2+…..+mn

CALCULATE Average mark (Avg)=Total mark /n

IF (Avg >=90)

PRINT grade A

ELIF (Avg >=80 && Avg <90)

PRINT grade B

ELIF (Avg >=80 && Avg >70)

PRINT grade C

ELSE

PRINT grade D

PRINT The Total mark and student name

INCREMENT I=I+1

END IF

END FOR

END

RESULT:

The algorithm, flow chart and pseudo code is written for student grade analysis.

EXPT. NO. 1.g SIN SERIES

FLOW CHART:

Start

Stop

Print series

i=i+1

Series = series +sum

Sum= [(-1)\*\*i] \* [x\*\*(2i+1)] / (2i+1)!

If i<=n

Initialize i=1, series =x

Get the number of terms (n)

false

true

AIM:

To write an algorithm, pseudo code and draw flow chart for generating sin series

ALGORITHM:

STEP-1: Start

STEP-2: Get the number of terms (n )

STEP-3: Initialize i=1, series =x

STEP-4: Check if i<=n

STEP-5: If true, Sum =[(-1)\*\*i] \*[x\*\*(2i+1)] / (2i+1)!

STEP-6: series = series + sum

STEP-7: increment i value by 1

STEP-8: If condition becomes false print series

STEP-9: Stop

PSEUDO CODE:

BEGIN

READ The number of terms (n)

INITIALIZE I=1,series =x

FOR (I<=n)

COMPUTE Sum =[(-1)\*\*i] \*[x\*\*(2i+1)] / (2i+1)!

Series =series +sum

INCREMENT i =i+1

END FOR

PRINT Series

END

RESULT:

The algorithm, pseudo code and flow chart is written for generating sin series