FLOWCHART:

it is defined as the graphical representation of the logic for problem solving

ALGORITHM:

It is a ordered sequence of finite, well defined instructions for computing a task in an english like representation of logic which is use to solve the problem

TOOLS USED;

* Lucid chart
* Smart draw
* Canva
* Visme
* Zenflowchart
* Visual paradiagram
* Creatly
* Goodle draw

TO DRAW FLOWCHART AND WRITE ALGORITHM FOR THE

FOLLOWING PROBLEM

Ex no:1 a)

Calculating electric bill

AIM:

To draw and write flowchart and algorithm for calculating electric bill

ALGORITHM:

Step1 : Start

Stp2: get the previous and current reading

Step3: calculate units consumed=previous – current

Step4: get the number of units consumed=units

Step5: if units<=100

5.1 : energy charge=0, fixed charge=0, duty charge=0

Step6: if units<=200

6.1: energy charge=0+1.5\*(units-100) fixed charge=20, duty charge=18

Step7: if units<=500

7.1: energy charge = 3.5\*(ubits-100) fixed charge= 30, duty charge=48

Step8: if units<=7500

8.1: energy charge = 45\*(400)+6\*(units-500) fixed charge=75, duty charge = 100

Start

Previous and current reading

Unit consumed=previous-current

Get the units consumed= units

If unit <=100

Energy charge=0 fixed charge=0 duty charge =0

Ifunit<=200

Total charge +fixed charge +duty charge

Energy charge=0+(unit-100)\*1.5 fixed charge=20,duty charge=18

If unit<=500

Energy charge=0+(100\*2)+ (unit-200)\*3,fixedcharge=300, duty charge=48

Display the current bill

Energy charge=0+(100\*3.5)+(300\*4.6)+(unit-500)\*6.6 fixed charge-50, duty charge167.2

If unit<=7500

stop

break

RESULT:

Thus the flowchart and algorithm are given for the given problem

*TO DRAW FLOW CHART AND WRITE ALGORITHM FOR THE*

*FOLLOWING PROBLEM*

*Ex no :1 b)*

Student grade analysis

AIM:

To draw and write flowchart and algorithm for student grade analysis

ALGORITHM:

Step1: begin

Step2: read number of students=n

Step3: initialize i=1

Step4: if i <=n

Step5: get name, roll no, m1,m2,m3,m4.

Step6: calculate avg=m1+m2+m3+m3\4

Step7: if avg>=90

7.1: grade A

Step8: if 90>avg>=70

8.1: grade B

Step9: if 70> avg>=50 go to step:9.1 else go to step 9.2

9.1: grade C

9.2: grade D

Step10: print name, roll no, grade

Step11: stop

start

FLOWCHART:

Read no of students

Print name, roll no, grade

Grade A

Grade C

Grade B

If 90> avg>=70

Grade D

If 70> avg>=50

If avg>=90

Get name, roll no, mi,m2,m3, m4

not valid

break

Avg=m1+m2+m3+m4/4

i<=n

initialise i=1

RESULT:

Thus the flowchart and algorithm are given for the given problem

TO DRAW FLOWCHART AND WRITE ALGORITHM FOR THE

FOLLOWING PROBLEM

Ex no:1 c)

Electric current in 3 phase AC circuit

AIM:

To draw and write flowchart and algorithm for calculating electric current in 3 phase

AC circuit.

ALGORITHM:

Step1: start

Step2: read values of pf , I,V

Step3: calculate P=√3\*PF\*I\*V

Step4: display “the result is P”

Step5: Stop

FLOW CHART

start

stop

Calculate P=v3\*PF\*I\*V

8pf

Read pf,I,V

RESULT:

Thus the flowchart and algorithm are given for the given

TO DRAW FLOWCHART AND WRITE ALGORITHM FOR THE

FOLLOWING PROBLEM

Ex no:1 d)

Calculate sine series

*AIM*:

To draw and write flowchart and algorithm for calculating sine series

ALGORITHM:

Step1: start

Step2: get the values of x

Step3: initialize i=1,sine=0

Step4: get the values of N

Step5: if N<x ,

Step6:declare PI=3.142

Step7: x=x\*PI/180

Step8: t=x

Step9: sum=x

Step10: for i<-p

Step11:t=tx^2/2i(2i+1)

Step12: sum=sum + t

Step13: go to loop

Steo14:print sum

Step15: stop

FLOWCHART:

Get x

start

I=i+1

Sum=sum-t

T=-t\*x\*x/2i(2i\*i)

stop

Print sum

If n<=n

Sum=x

Term(t)=x

I=1 PJ=3.142

Get the value ‘n’

Initialise the value i=1,sine=0 import math

RESULT:

Thus, the flowchart and algorithm are given for the given

TO DRAW FLOWCHART AND WRITE ALGORITHM FOR THE

FOLLOWING PROBLEM

Ex no:1 e)

Calculating weight of steel rod

AIM:

draw and write flowchart and algorithm for calculating weight of steel rod

ALGORITHM:

Step1: start

Step2: get number of rods =n

Step3: initialise i=1 and weight=0

Step4: if i<=n go to step 7 else go to step 6

Step5: get diameter (D) and the length(l)

Step7: print weight

Step8: print the weight of the rod

Step9: stop

FLOWCHART:

start

stop

Print weight

Weight =D+D\*l/162

Get diameter(D) and length(l)

Print the weight of the rods

If i<=n

Weight=0

Initialise i=1

Get no.of rods =n

RESULT:

Thus, the flowchart and algorithm are given for the given problem

TO DRAW FLOWCHART AND WRITE ALGORITHM FOR THE

FOLLOWING PROBLEM

Ex no 1 f)

Calculating weight of a motor bike

AIM:

To draw and write flowchart and algorithm for calculating weight of motor bike

ALGORITHM:

Step1: start

step2:get gross vehicle weight rating GVW

step3: get dry weight DW

step4: get fuel weight FW

step5:get rider weight RW

step6: get passenger weight PW

step7: calculate total=PW+RW

step8: get load

step9: calculate load weight=total +load

step10: calculate safe weight=GVWR- load weight

step11: if safe weight>=D

step12: print safe ride

step13: else print for safe ride reduce weight and go to step 8

step14: stop

FLOWCHART:

stop

Safe ride

For safe ride reduce weight

If safe weight>=0

Safe weight= GVWR=load weight

Load weight= tot+load

Get load

Total=PW+RW+FW+DW

Get passenger weight PW

Get rider weight RW

Get fuel weight FW

Get dry weight DW

Get gross vehicle weight rating GVWR

start

RESULT:

Thus, the flowchart and algorithm are given for the given problem

TO DRAW FLOWCHART AND WRITE ALGORITHM FOR THE

FOLLOWING PROBLEM

Ex no 1 g)

Retail shop billing

AIM:

To draw and write flowchart and algorithm for retail shop billing

ALGORITHM:

Step1: start

step2: get no of items=n

step3: initialise i=1 and bill=0

step4: if i<=n

step5: get quantity of price item

step6: calculate bill= quantity(Q)\*price(P)

step7: if bill >=5000 go to step 10

step8: calculate new bill= bill – bill\*0.80 and go to step 4

step9: print new bill you have 8-% dis

step10: print bill and you have no discount

step11: stop

FLOWCHART:

start

Print bill and you have dis

stop

Print new bill you have 50% dis

Number =bill=bill\*0.50

If bill>500

Bill= Q\*P

Get Q and P of item

If i<=n

Bill = 0

I=1

Get number of items=n

RSEULT:

Thus, the flowchart and algorithm are given for the given problem