1.CALCULATING ELECTRICITY BILL

Name :Mathesh

Roll NO:22CSEA44

Aim

   To draw algorithm and flowchart and calculating Electricity bill

ALGORITHM

Step1:start

Step2: Enter the this month unit, previous month unit

Step3:unit =This month unit -previous month unit

Step4: check unit <=100,if true,no amount to pay,else move to next step

 Step5: Check unit >100 && unit <=200,if true,print the process of condition

Step6: check unit>200&&unit<=400,if true,print the process of that condition

Step7: check unit>400,if true,print its process

Step8: Total amount =amount

Step9:print total amount

Step10:stop

Flow chart

```
        ┌─────────────┐
        │    Start    │
        └─────────────┘
              │
     ┌─────────────────────┐
     │ Read the value of   │
     │ this month, previous│
     │ month unit          │
     └─────────────────────┘
              │
  ┌──────────────────────────────────────┐
  │ Unit=This month unit -previous month │
  │ unit                                 │
  └──────────────────────────────────────┘
              │
         ◇ Unit<=100 ◇ ──Yes──> [ Amount=0 ]
              │
             No
              │
      ◇ Unit>100&&unit<=200 ◇ ──Yes──> [ Amount=(unit-100)*1.5 ]
              │
             No
              │
      ◇ Unit>200&&unit<=400 ◇ ──Yes──> [ Amount=((unit-100)*1.5)+((unit-200)*3.5) ]
              │
             No
              │
         ◇ Unit>400 ◇ ──Yes──> [ Amount=((unit-100)*1.5)+((unit-200)*3.5)+((unit-400)*4.5) ]
              │
             No
              │
     [ Print amount=amount ]
              │
      / Print total amount /
              │
        ┌─────────────┐
        │    Stop     │
        └─────────────┘
```

Flowchart text content:

- Start
- Read the value of this month, previous month unit
- Unit=This month unit -previous month unit
- Unit<=100
  - Yes → Amount=0
  - No
- Unit>100&&unit<=200
  - Yes → Amount=(unit-100)*1.5
  - No
- Unit>200&&unit<=400
  - Yes → Amount=((unit-100)*1.5)+((unit-200)*3.5)
  - No
- Unit>400
  - Yes → Amount=((unit-100)*1.5)+((unit-200)*3.5)+((unit-400)*4.5)
  - No
- Print amount=amount
- Print total amount
- Stop

2.COMPLETE ELECTRICAL CURRENT IN 3 PHASE AC CIRCUIT

Name:M.Mathesh

Roll no:22CSEA44

AIM

To draw flowchart and write algorithm for compute electrical current in 3 phase AC circuit

Algorithm

Step1:start

Step2:Read the value of kw,v
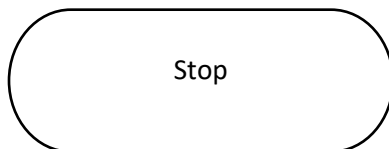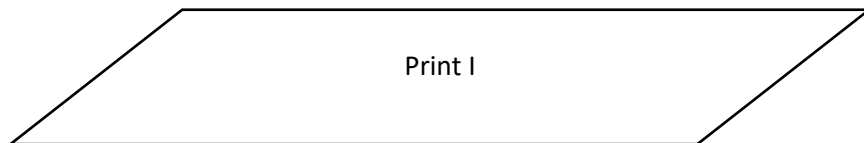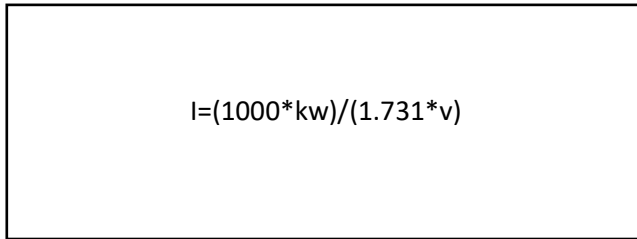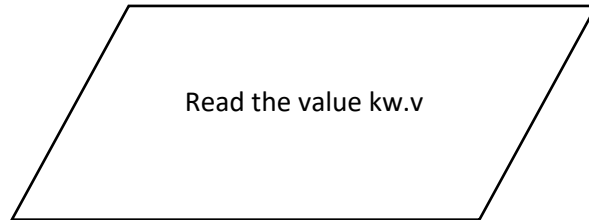
Step3:To find the I calculate (1000*kw)/(1.732*v)

Step4: display the value I

Step4:stop

Flowchart

Formula :kw=(v*I*PF*1.732)/1000

To find I=1000*kw/1.732*v

Start

Read the value kw.v

I=(1000*kw)/(1.731*v)

Print I

Stop

Name :M.Mathesh

Roll no:22CSEA44

AIM

To draw flowchart and write algorithm for calculating sine series

ALGORITHM

Step1 : Start

Step2 :Get the number of items

Step3 :initialize i=1, series=z

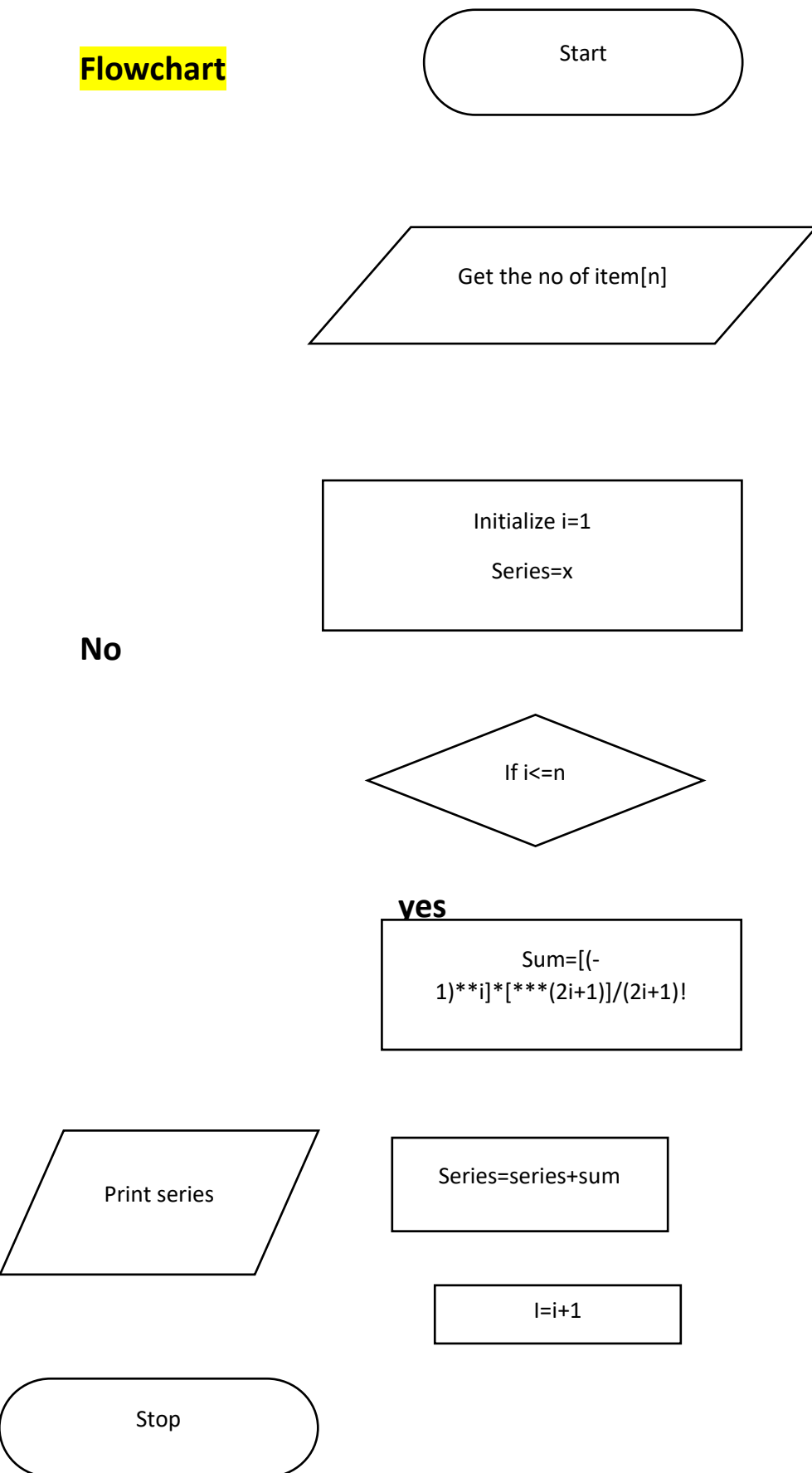Step4:If i<=n Sum=[(-1)**1]+[**(2i+1)/(2i+1)!

4.1: series=series+sum

4.2: Increment I value by (i=i+1)go to step4

Step5:if condition is false

Step6:print series

Step7:stop

Flowchart

Start

Get the no of item[n]

Initialize i=1

Series=x

No

If i<=n

yes

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

Print series

Series=series+sum

I=i+1

Stop

4. CALCULATE THE RATAIL SHOP BILLING

Name:M.Mathesh

Roll no:22CSEA44

AIM

To draw flowchart and write algorithm for calculate the RATAIL shop billing

Algorithm

Step1:start

Step2:read the bill number

Step3:enter the customer name address

Step4:get the total number of item purchased:N

Step5:If N=0;yes:5.1,5.2;No go to step 6

   5.1:sum =0

   5.2:go to step 8

Step6: initialize i=1,sum=0

Step7:if i<=N;yes=move to further step; no go to step8

   7.1:read the value of product v

   7.2:sum=sum+v

   7.3: increment of i i++

Step8:if sum >2000 yes go to 8.1 No go to step 9

   8.1 :sum X 0.20=D.A(Discount amount)

8.2:total amount=sum-D.A

8.3: print total amount

Step9: print sum

Stop10:stop

Start

Read the bill no read the Customer name address

Enter no of items purchased n

If n==0

Sum=0,i=1

If i<=N

Read the value of item v
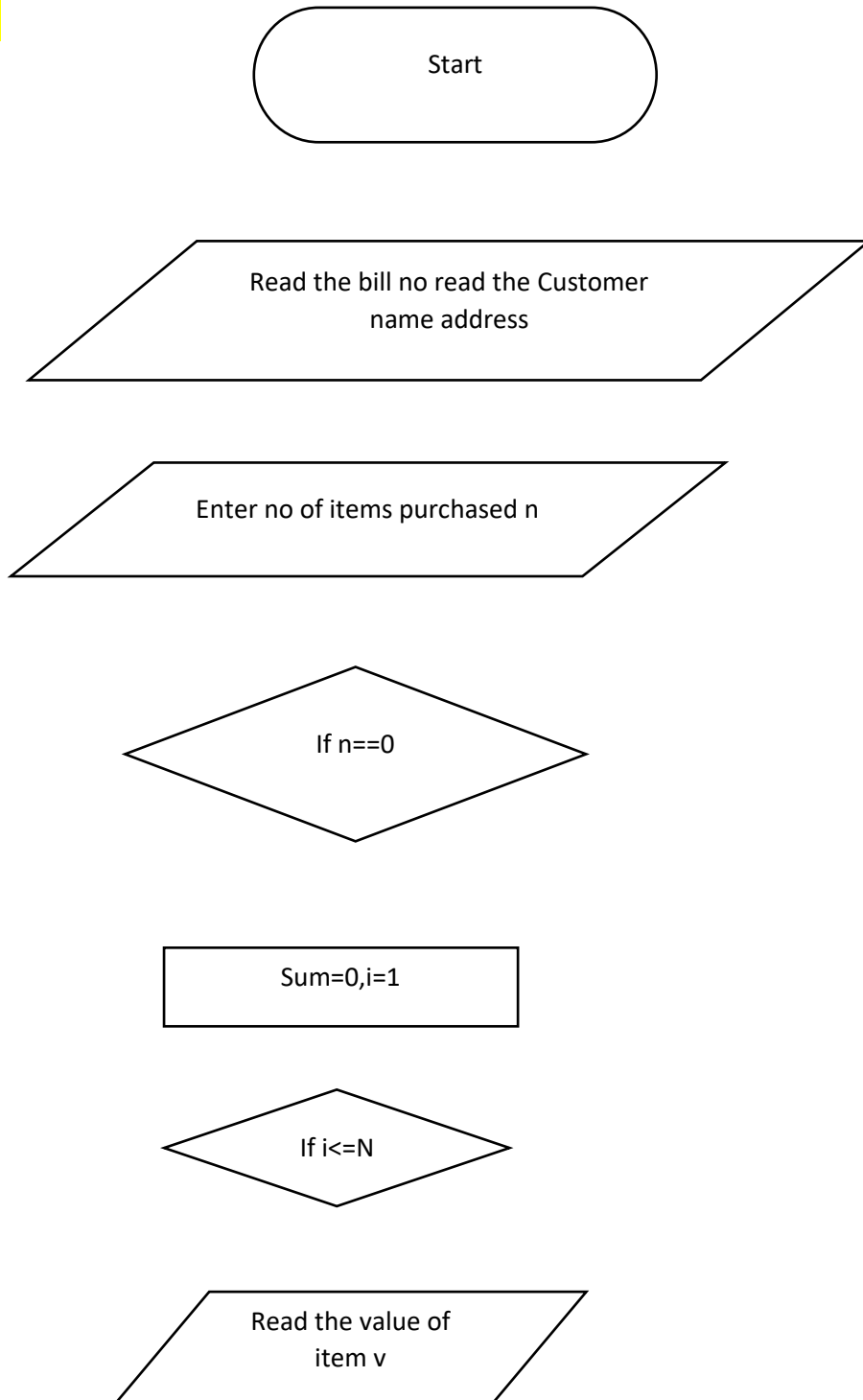
```
┌─────────────────────────┐
│       Sum=sum+v         │
└─────────────────────────┘


┌─────────────────────────┐
│          i++            │
└─────────────────────────┘


        ◇ If sum>2000 ◇


┌─────────────────────┐          ┌─────────────────────────┐
│   D.A =sum*0.20     │          │     Total amount=sum    │
└─────────────────────┘          └─────────────────────────┘


┌─────────────────────┐            ╱ Print total amount ╱
│ Total amount=sum-D.A│
└─────────────────────┘


 ╱ Print total amount ╱


           (  Stop  )
```

Name:M.Mathesh

Roll no :22CSEA44

AIM

To draw flowchart and write algorithm to calculating weight of meter bike

Algorithm

Step1:start

Step2:get the tybe of motercycle M

Step:based on type M choose weight as

Step3:based on type M choose weight as

   3.1:if M=Chopper,W= 317kg

   3.2:if M=Bobber,W=306kg

   3.3:if M=cruiser,W=256kg

   3.4:if M=scramber,W=182kg

Step4:else print as cannot find the weight

Step5:print the weigh

Step6:stop

Flowchart

Start

Get the tybe of motercycle as M

If M=chopper — **Yes** → W=317kg

No

If M=Bobber — **Yes** → W=306kg

No

If M=Scrambler — **Yes** → W=182kg

No

If M=Cruiser — **Yes** → W=256kg

No

Else print as connot find the weight

Print the weigh

Stop
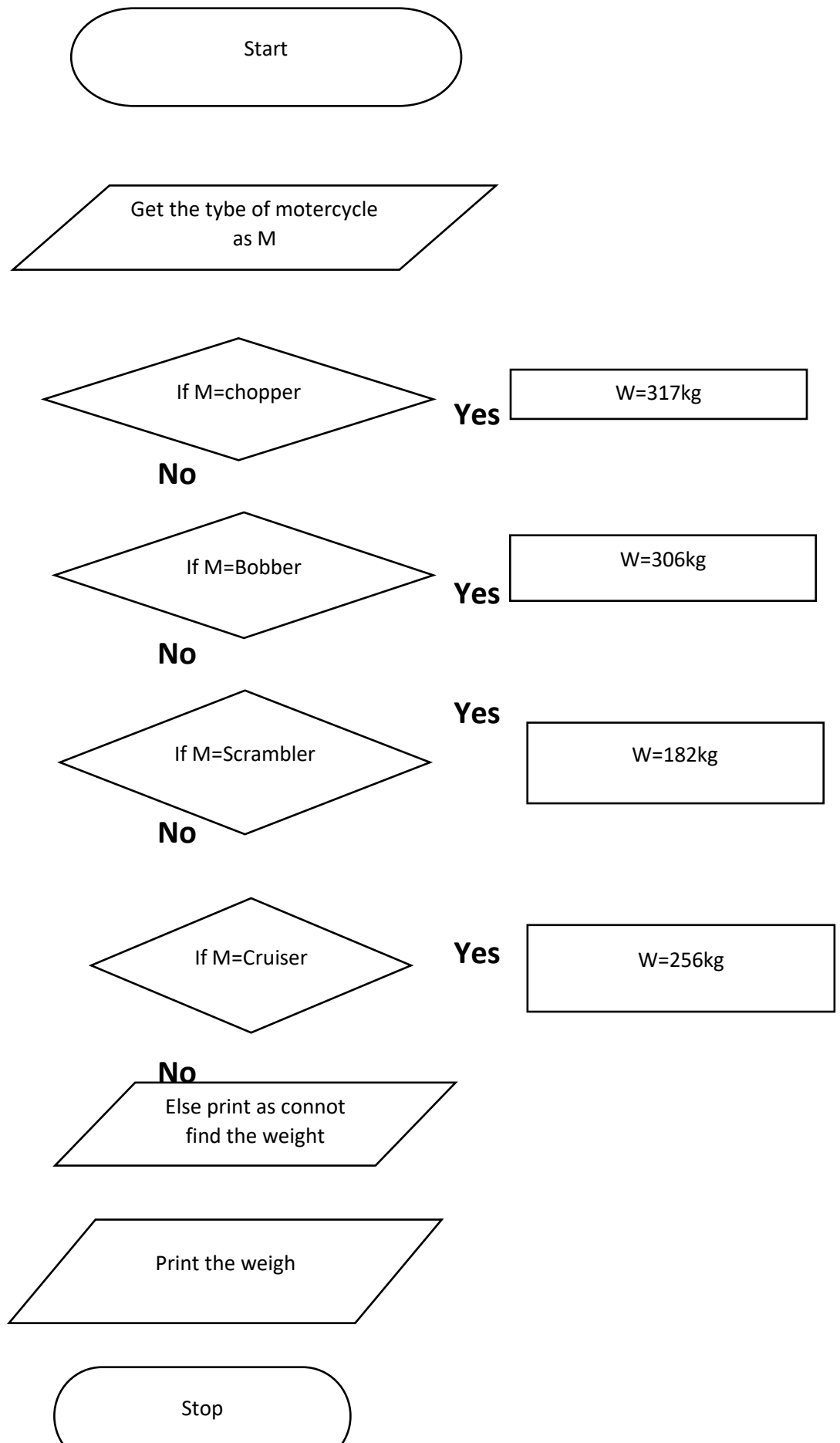
6.WEIGHT OF STEEL RODS

Name:M.Matheah

Roll no:22CSEA44

AIM

To draw flowchart and write algorithm for calculate the of steel rods

Algorithm

Step1:start

Step2:Enter the Number of rods (N.R)

Step3:If N.R==0,Yes 3.1,3.2 no go to step 4

   3.1:total weight is 0

   3.2:go to step 6

Step4: Initialize total weight is 0,i=1

Step5:if N.R>=I,yes go to 5.1 no-go to step 6

   5.1:read the value D,L

   5.2 :W=((D*D)*L/162

   5.3:Total weight=total weight + W

   5.4: increment I,i++

Step6:print total weight

Step7:stop

Flow chart

```
         ┌──────────────┐
         │    Start     │
         └──────────────┘
                │
        ╱───────────────╲
       │ Enter no of rod │
       │      N.R        │
        ╲───────────────╱
                │
          ◇ N.R==0 ◇                    ┌──────────────┐
                │                        │    T.W=0     │
         ┌──────────────┐                └──────────────┘
         │  T.W=0,i=i   │
         └──────────────┘
                │
          ◇ If R>=i ◇
                │
        ╱───────────────╲
       │ Read the value  │
       │     of D.L      │
        ╲───────────────╱
                │
         ┌──────────────┐
         │ W=((D*D)*L)/162 │
         └──────────────┘
                │
         ┌──────────────┐
         │  T.W=T.W+W   │
         └──────────────┘
                │
         ┌──────────────┐
         │  Count i++   │
         └──────────────┘
                │
        ╱───────────────╲
       │   Print T.W     │
        ╲───────────────╱
                │
         ┌──────────────┐
         │    Stop      │
         └──────────────┘
```

Start

Enter no of rod N.R

N.R==0

T.W=0

T.W=0,i=i

If R>=i

Read the value of D.L

W=((D*D)*L)/162

T.W=T.W+W

Count i++

Print T.W

Stop

Name:M.Mathesh

Roll no:22CSEA44

AIM
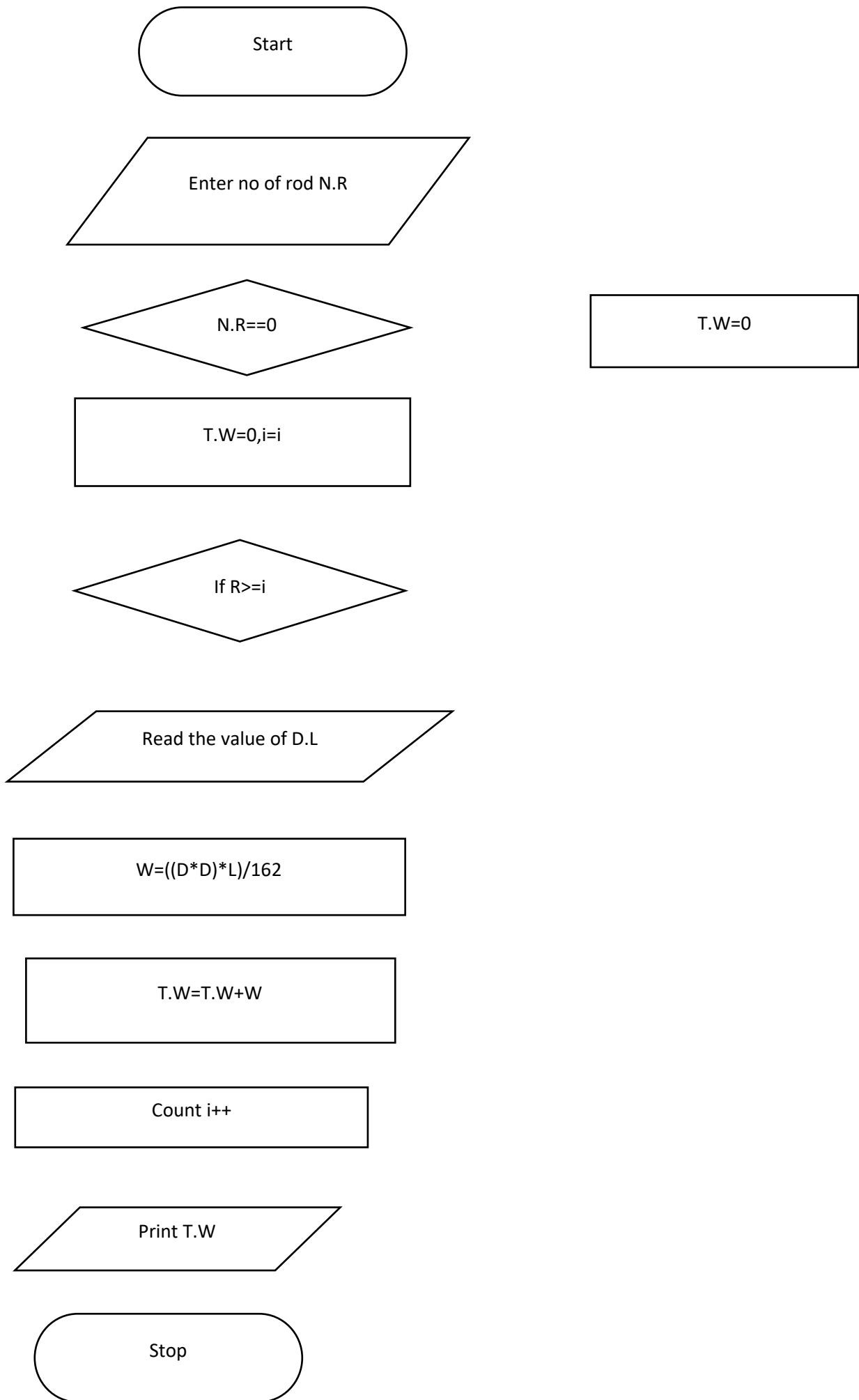
> To draw flowchart and write algorithm for calculating students grade analysis

Algorithm

Step1:start

Step2:read the number of students as N

Step3: initialize i;i=1

Step4:if i<=N true go to step5, false go to step15

Step5:Read the marks m1,m2,m3,&name of students

Step6:total=m1+m2+m3

Step7: average=total/3

Step8:if average>=90&& average<=100;yes go to step 8.1, no go to step 9

> **8.1: grade=0**

Step9:If average>=75&&avg<90;yes go to step 9.1,go to step10

> **9.1 grade=A**

Step10:if average>=50&& average<75; yes go to step10.1,no go to step11

> **10.1: Grade=B**

Step11:if average>=35&& average<50;yes go to step11.1,no go to step12

11.1:Grade=C

Step12:if average<35;yes go to step12.1 ,no go to step13

12.1:Grade=D

Step13: increment i,i++

Step14:print the name & grade

Step15:stop

Start

```
┌─────────────────────────────┐
│  Enter the no of students N  │
└─────────────────────────────┘

        ┌──────────┐
        │   i=1    │
        └──────────┘

        ╱────────────╲
       ╱    If i<=N    ╲
       ╲              ╱
        ╲────────────╱

      ╱──────────────────╲
     ╱    Read marks       ╲
     ╲  m1,m2,m3,&name     ╱
      ╲──────────────────╱

    ┌──────────────────────┐
    │   Total=m1+m2+m3     │
    └──────────────────────┘

    ┌──────────────────────┐
    │   Average=total/3    │
    └──────────────────────┘

       ╱──────────────────╲              ┌──────────────────────┐
      ╱  If average>=90 and ╲             │       Grade=0        │
      ╲  average<=100       ╱             └──────────────────────┘
       ╲──────────────────╱

       ╱──────────────────╲              ┌──────────────────────┐
      ╱  If average>=75     ╲             │       Grade=A        │
      ╲  and average<90     ╱             └──────────────────────┘
       ╲──────────────────╱
```

If average>=50and average<75

Grade=B

If average >=35and average<50

Grade=C

If average<35

Grade=D

i+=1

Print name: grade

Stop