```
START
  │
  ▼
┌─┤ INITIALIZATION(I) ├─┐
│
▼
┌─┤ VALIDATE(V) ├─┐
│
▼
┌─┤ CALCULATE(C) ├─┐
│
▼
┌─┤ TERMINATION(T) ├─┐
│
▼
STOP
```

START

INITIALIZATION(I)

VALIDATE(V)

CALCULATE(C)

TERMINATION(T)

STOP

```
I
```

```
x=0;
ns=4;
grade=0,div=0;
Eng=Array;
math=Array;
science=Array;
social=Array;
totstu=Array;
pp=Array;
totstudents,totalfail,totalpass=0;
tpp=0;
```
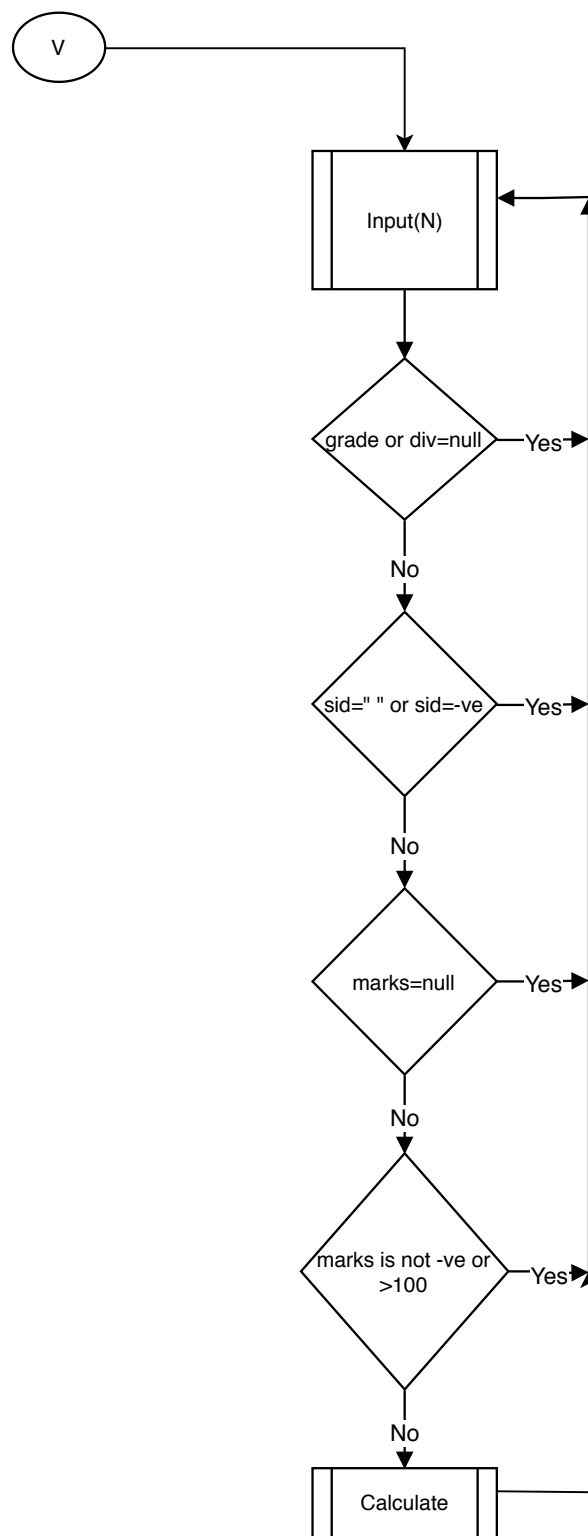
```
RTN
```

```javascript
var x = 0;
var ns = 4;
var grad=0,div=0 ;
var sid= new Array;
var eng = new Array();
var math = new Array();
var science = new Array();
var social = new Array();
var pass = new Array(13).fill(0);
var fail = new Array(13).fill(0);
var totstud = new Array(13).fill(0);
var pp=new Array(13).fill(0);
var totstudents=0;
var totalpass=0;
var totalfail=0;
var tpp;
```

```
     V
```

```
  Input(N)
```

grade or div=null — Yes →

No

sid=" " or sid=-ve — Yes →

No

marks=null — Yes →

No

marks is not -ve or >100 — Yes →

No

```
 Calculate
```
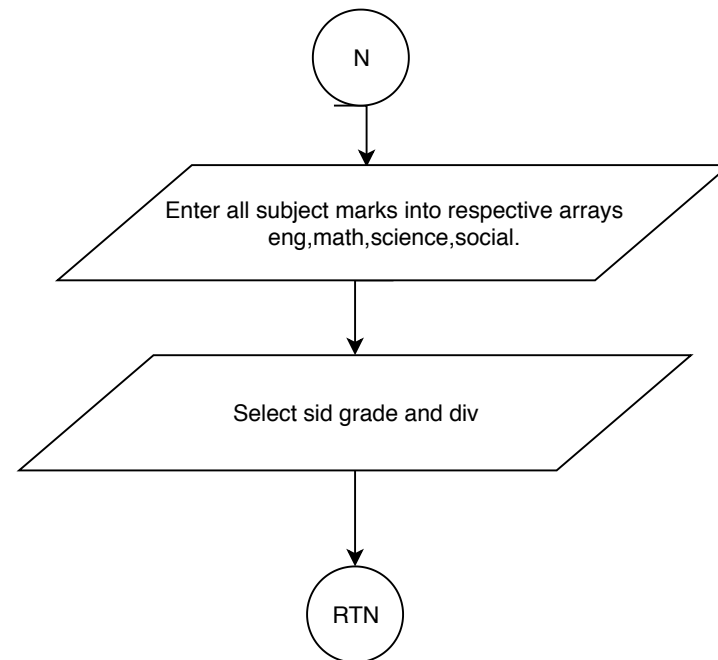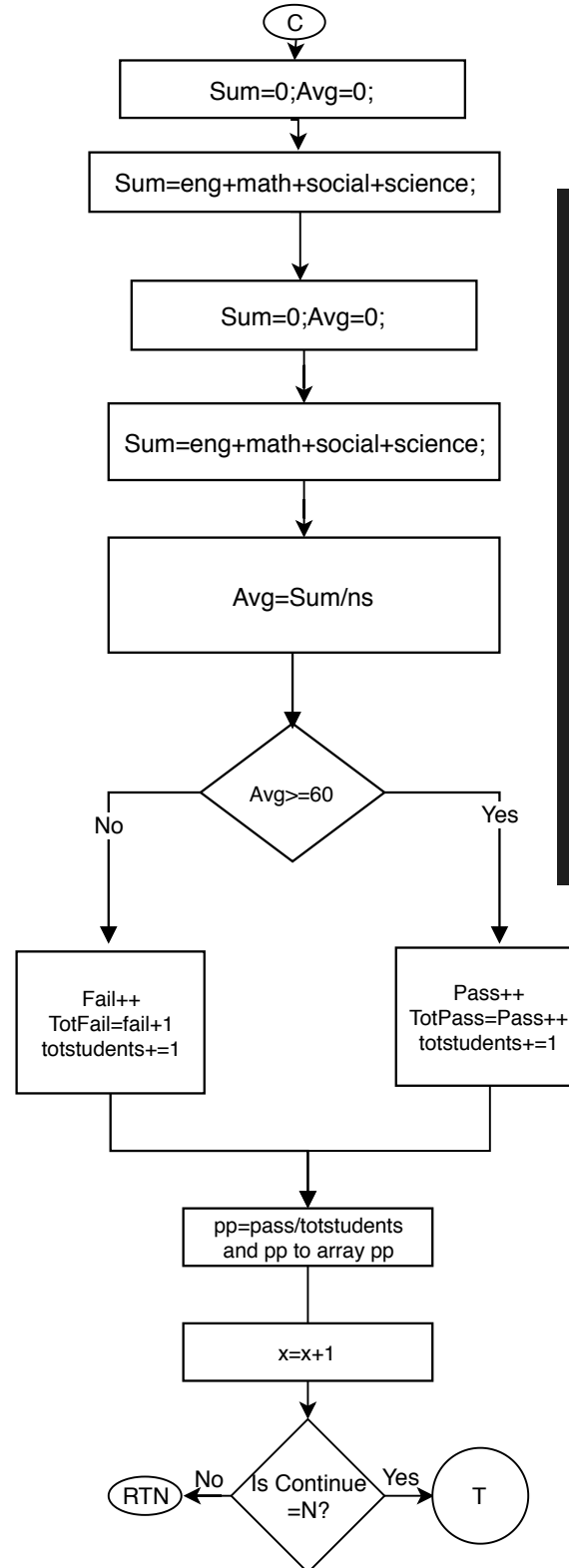
```
 if(sid[v]==sid[x])
{
 alert("Student ID already exists");
 t=0;
}
}

   if((isNaN(sid[x])))
   {
       alert("Enter a StudentID")
   }
   else if(sid[x]<0)
   {
       alert("Enter a Valid StudentID")
   }
   else if (strUser == 0) {
       alert("Please select a Grade");
   }
   else if (strUser2 == 0) {
       alert("Please select a division");
   }
   else if ((isNaN(eng[x]))) {
       alert("Please enter some  marks for English ");
   }
   else if ((isNaN(math[x]))) {
       alert("Please enter some marks for Maths ");
   }
   else if ((isNaN(science[x]))) {
       alert("Please enter some marks for Science ");
   }
   else if ((isNaN(social[x]))) {
       alert("Please enter some marks for Social ");
```
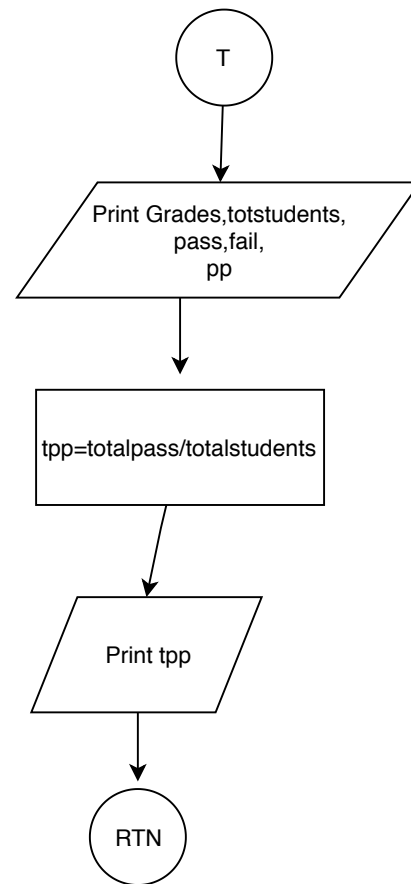
```
N
```

Enter all subject marks into respective arrays
eng,math,science,social.

Select sid grade and div

```
RTN
```

```javascript
sid[x] = parseInt(document.getElementById("SID").value, 10);
grad = parseInt(document.getElementById("grades").value, 10);
div = parseInt(document.getElementById("div").value, 10);
eng[x] = parseInt(document.getElementById("english").value, 10);
math[x] = parseInt(document.getElementById("maths").value, 10);
science[x] = parseInt(document.getElementById("science").value, 10);
social[x] = parseInt(document.getElementById("social").value, 10);
var g = document.getElementById("grades");
var strUser = g.options[g.selectedIndex].value;
var strUser1 = g.options[g.selectedIndex].text;
var d = document.getElementById("div");
var strUser2 = d.options[d.selectedIndex].value;
var strUser3 = d.options[d.selectedIndex].text;
var t=1;
```

```
C
```

Sum=0;Avg=0;

Sum=eng+math+social+science;

Sum=0;Avg=0;

Sum=eng+math+social+science;

Avg=Sum/ns

Avg>=60

No

Yes

Fail++
TotFail=fail+1
totstudents+=1

Pass++
TotPass=Pass++
totstudents+=1

pp=pass/totstudents
and pp to array pp

x=x+1

Is Continue
=N?

No → RTN

Yes → T

```
var z = grad;
var sum = eng[x] + math[x] + science[x] + social[x];
var avg = sum / ns;
if (avg >= 60) {
    pass[z]++;
    totstud[z]++;
    totalpass++;
    totstudents++;

}
else if (avg < 60) {
    fail[z]++;
    totstud[z]++;
    totalfail++;
    totstudents++;
}
pp[z] = ((pass[z] / totstud[z]) * 100);
x++;
```

```
T
```

Print Grades,totstudents,
pass,fail,
pp

tpp=totalpass/totalstudents

Print tpp

```
RTN
```

```javascript
var myTable = "<h1>Final Report</h1>";
myTable += "<table><tr><td >Grades</td>";
myTable += "<td>No of students</td>";
myTable += "<td>Pass</td>";
myTable += "<td>Fail</td>";
myTable += "<td>Pass Percentage</td></tr>";


for (var i = 1; i <= 12; i++) {
    myTable += "<tr><td>Grade" + i + "</td>";
    myTable += "<td>" + totstud[i] + "</td>";
    myTable += "<td>" + pass[i] + "</td>";
    myTable += "<td>" + fail[i] + "</td>";
    myTable += "<td>" + pp[i].toFixed(2) + "</td></tr>";
}

if(totstudents==0)
{
    tpp=0;
}else{
    tpp=(totalpass/totstudents)*100;
}
myTable += "<tr><td>Total</td>";
myTable += "<td>" + totstudents + "</td>";
myTable += "<td>" + totalpass + "</td>";
myTable += "<td>" + totalfail + "</td>";
myTable += "<td>" + tpp.toFixed(2) + "</td>";
myTable += "</table>";
document.getElementById("Result").innerHTML = myTable;
```