LOGICAL OPERATOR

Question 1: Voting Eligibility

***Scenario:* Determine if a person is eligible to vote.**

Inputs:

- age

- citizenship (boolean)

Outputs:

- canVote

Algorithm:

1. Check if the age of the person is 18 or older.

2. Check if the person has citizenship.

3. If both conditions are true, print canVote.

4. Otherwise, print can not Vote.

Example:

- Input: age = 20, citizenship = true

- Output: canVote

Code:

```
var age=20;
    var citizenship="true"
    if(age>=18 && citizenship=="true");
    {
      console.log("can vote");
    }
    else{
    console.log("can not vote");
    }
```

Question 2: Admission to a Club

***Scenario:* Determine if a person can enter a club.**

Inputs:

- age

- hasInvitation (boolean)

Outputs:

- canEnterClub

Algorithm:

1. Check if the age of the person is 21 or older.

2. Check If the person has an invitation.

3. If either condition is true, print canEnterClub.

4, Otherwise, print canNotEnterClub.

Example:

- Input: age = 20, hasInvitation = true

- Output: canEnterClub

Code:

```
var age=20;
    var hasInvitation="true"
    if(age>=21 || hasInvitation=="false");
    {
    console.log("can enter club");
    }
    else{
    console.log("can not enter club");
    }
```

Question 3: Discount Eligibility

Scenario: Determine if a person is eligible for a discount at a store.

Inputs:

- isMember (boolean)

- age

Outputs:

- isEligibleForDiscount

Algorithm:

1. Check if the person is a member.

2. Check if the person is a senior (65 years old or older).

3. If either condition is true, print isEligibleForDiscount.

4. Otherwise, set isNotEligibleForDiscount.

Example:

- Input: isMember = false, age = 70

- Output: isEligibleForDiscount

Code:
```
var isMember="false";
    var age=70;
    if(isMember==false || age>=65){
     console.log("is eligible for discount");
     }
     else{
     console.log("is not eligible for discount");
     }
```

Question 4: Scholarship Eligibility

Scenario: Determine if a student is eligible for a scholarship.

Inputs:

- gpa

- extracurriculars (boolean)

- recommendation (boolean)

Outputs:

- IsEligibleForScholarship (boolean)

Algorithm:

1. Check if the GPA of the student is 3.5 or higher.

2. Check if the student participates in extracurricular activities.

3. Check if the student has a recommendation letter.

4. If the GPA is 3.5 or higher AND either participation in extracurricular activities or a recommendation letter is true, print isEligibleForscholarship.

5. Otherwise, set isNotEligibleForScholarship.

Example:

- Inputs: gpa = 3.6, extracurriculars = true, recommendation = false

- Output: isEligibleForScholarship

Code:

```
var gpa=3.6
var extracurriculars="true"
var recommendation="false"
if(gpa>=3.5 && extracurriculars=="true" ||  recommendation=="true")
{
console.log("is eligible for scholarship")
}
else{
console.log("is not eligible for scholarship")
}
```