Logical Operators

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`

```
let age = 20;
let citizenship = true;
if(age>=18 && citizenship==true){
  console.log("canVote");
}
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`

```
var age=20;
var hasInvitation=true;
if(age>=21 || hasInvitation==true){
  console.log("canEnterClub");
}
else{
  console.log("canNotEnterClub");
}
```

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`

```
var isMember=false;
var age=70;
if(isMember==false || age>=65){
 console.log("isEligibleForDiscount");
}
else{
  console.log("isNotEligibleForDiscount");
```

}

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`

```
var gpa=3.6;
var extracurriculars=true;
var recommendation=false;
if(gpa>=3.5 && extracurriculars==true || recommendation==true){
  console.log("isEligibleForScholarship");
}
else{
  console.log("isNotEligibleForScholarship");
}
```