```
1
2  // 1
3  age = "17"
4  citizenship = "true"
5
6  if (age>"18" && citizenship == "true" ){
7      console.log("can vote")
8  }
9   else  {
10     console.log("can not vote")
11 }
12
13
14
15
16
17
18 // 2
19
20 age = "20"
21 invitation = "true";
22
23 if (age>= 21 || invitation == "true"){
24     console.log("canEnterClub")
25
26 } else {
27     console.log("can not Enter club")
28 }
29
30
31
32 // 3
33
34 member = false;
35 age = 70 ;
36
37 if (age>= 65 || member == true){
38
39     console.log("Eligible for discount")
40 } else {
41     console.log("not eligible for discount")
42 }
43
44
45 //4
46
47 gpa = 3.6;
48 extracurriculars = true ;
49 recommendation = false;
50
51 if (gpa>=3.5 && extracurriculars == true || recommendation == true){
52     console.log("isEligible for scholarship")
53 } else {
54     console.log("not eligible for scholarship")
55 }
56
```

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
`

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`

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`

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:
- Input: `gpa = 3.6`, `extracurriculars = true`, `recommendation = false`
- Output: `isEligibleForScholarship`