Document on switch statement

Question 1: Voting Eligibility

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

***Inputs: ***

age citizenship (Boolean)

***Outputs: *** can vote

***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 can vote. 4. Otherwise, print cannot vote.

***Example: ***

Input age 28, citizenship true

Output: can vote

Code:

```
var age = 28;

var citizenship = true;

switch(true) {
    case age >= 18 && citizenship == true:
        console.log ("can vote")
    break;
    default:
    console.log ("cannot vote")
    break;
  }
```

Explanation: Here, I taken variable age and is set to 28. Then I set citizenship to true, it, means that the person is a citizen. Later I wrote conditions using switch statement i.e. switch(true) it is used to evaluate conditions that return true. Since both conditions are true (age is 28 and citizenship is true), the code inside that case runs, printing "can vote" to the console. If neither condition were true, it would print "cannot vote".

Question 2: Admission to a Club

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

***Inputs: ***

age has Invitation (Boolean)

***Outputs: *** can enter club

***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 Can Enter Club

4. Otherwise, print Cannot Enter Club

***Example**:

Input: age 28, hasInvitation true

Output: Can Enter Club

Code:

```
var age1 = 28;
hasInvitation = true;

switch (true) {
    case age1>=21 && hasInvitation == true:
        console.log ("Can Enter Club")
        break;
        default:
        console.log ("Cannot Enter Club")
        break;
  }
```

Explanation: Here, I taken variable age1 and is set to 28. Then I set hasInvitation to true, it, means that the person has invitation. Later I wrote conditions using switch statement i.e. switch(true) it is used to evaluate conditions that return true. Since both conditions are true (age is 28 and hasInvitation is true), the code inside that case runs, printing "Can Enter Club" to the console. If neither condition were true, it would print " Cannot Enter Club ".

Question 3: Discount Eligibility

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

***Inputs: ***

isMember (Boolean)

age

**Outputs:

is Eligible for Discount

*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 is Eligible for Discount.

4. Otherwise, set is Not Eligible for Discount

*Example: *

Input: IsMember false, age 78

Output: is Eligible for Discount

Code:

```
age = 78;
isMember = false;
switch(true) {
    case isMember==true || age >=65:
        console.log ("is Eligible for Discount");
        break;
        default:
         console.log ("is Not Eligible for Discount")
            break;
  }
```

Explanation: Here, I taken variable age and is set to 78. Then I set isMember to false, it, means that the person has no discount. Later I wrote conditions using switch statement i.e. switch(true) it is used to evaluate conditions that return true. Here, first condition is false and second condition is true. As we know that for logical OR operator if any one of condition is true output is true i.e.it will print code inside case (age is 78 and isMember is false), the code inside that case runs, printing "is Enter Eligible for Discount" to the console. If both conditions were false, it would print " is Not Eligible for Discount ".

Question 4: Scholarship Eligibility

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

*Inputs: *

gpe extracurriculars (Boolean)

recommendation (Boolean)

*Outputs:

Is Eligible for Scholarship (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 is Eligible for Scholarship".

5. Otherwise, set is Not Eligible for scholarship.

*Example:

Input: gpa 3.6, extracurriculars true, recommendation false

Output: is Eligible for Scholarship

Code:

```
var gpa = 3.6;
var extracurricular = true;
recommendation = false;
switch(true) {
    case (gpa>=3.5&&(extracurricular==true||recommendation==true)):
        console.log ("is Eligible for Scholarship");
        break;
    default:
        console.log (" is Not Eligible for Scholarship");
        break;
}
```

Explanation: Here, I taken variable gpa and is set to 3.6. Then I set extracurriculars true, recommendation false. Later I wrote conditions using switch statement i.e. switch(true) it is used to evaluate conditions that return true. Here, first condition is true then I evaluate second condition and third condition using OR operator and compared with first condition using AND operator. As we know that for logical OR operator if any one of condition is true output is true otherwise false. Later I compared with first condition here, condition is true so print “is Eligible for Scholarship”