

ASSIGNMENT 9

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 'canvote'.

4.Otherwise, print 'cannot vote'

Code:

```
var age = 2;  
  
var citizenship = "Indian";  
  
if (age>18 && citizenship){  
    console.log("Person can vote")  
}  
  
else{  
    console.log("Cannot vote")  
}
```

Exp: Here, first variable age, citizenship are assigned.The if condition is used to check if the age is greater than 18 (or) not,if the age is greater than 18, and then citizenship is true i.e Indian (both conditions are true) so it prints “Person can vote”. If any one of the condition is not satisfied it goes to else block and prints “Cannot Vote”.

Question 2: Admission to a club

Scenario: Determine if a person can enter the club.

Inputs:

age

'hasInvitation'(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 true, print 'can enter club'
4. Otherwise, print 'cannot enter club'

Example:

Input: age=20, hasinvitation=true

Output: 'can enter club'

Code:

```
var age1 = 2;  
var hasinvitation = true;  
if(age1>21 || hasinvitation){  
    console.log("can enter club")  
}  
else{  
    console.log("cannot enter club")  
}
```

Exp: Here, first we assigned variables age and hasinvitation. The if condition is used to check if the age is greater than 21 and has invitation is true, (if any of these conditions is true) it prints "can enter club", if both the conditions are not satisfied it prints "cannot enter club".

Question3: 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=70

Output: 'is eligible for discount'

```
var isMember = false;
```

```

var age = 85;

if(isMember || age>65){
    console.log("Is eligible for discount")
}

else(
    console.log("not eligible for discount")
)

```

Exp: Here, first we have 2 variables isMember and age. If the person is a member of the store or has age greater than 65 years, he is eligible for discount. The if condition checks if the person is eligible for discount, and prints "is eligible for discount". The else condition executes if the member is not a person of the store or age is less than 65 years.

Question4: Scholarship eligibility

Scenario: Determine if a student is eligible for a scholarship

inputs

gpa

'extracurricular' (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 the 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','extracurricular=true','recommendation=false'

Output: 'is eligible for scholarship'

Code:

```

var gpa = prompt("Enter GPA of student: ");

var extracurricular = prompt("Did you participate in extracurricular activities: ")

var recommendation = prompt("Do you have a recommendation letter: ")

if (gpa>=3.5 && (extracurricular=="true" || recommendation=="true")){

```

```
    alert("Is eligible for scholarship")
}
else{
    alert("not eligible for scholarship")
}
```

Exp: Here, we are checking if the student is eligible for scholarship or not. The variables are declared age, extracurricular, recommendation and the user gives the input via prompt. Based on the given input i.e if GPA is greater than 3.5 and the student has participated in extracurricular or has a recommendation letter then he/she is eligible for scholarship, either condition should be true. Otherwise, the student is not eligible for scholarship.