**Assignment 2:**

1. If your country split in half, and each half would contain half the population, then how many people would live in each half?

const country = "India";

const continent = "Asia";

let population = 150;

const language = "Hindi";

const halfPopulation = population / 2;

console.log(halfPopulation);

1. Increase the population of your country by 1 and log the result to the console

let population = 100000000; // Initial population

population += 1

{

console.log("Updated population:", population);

}

3. Finland has a population of 6 million. Does your country have more people than Finland?

const country = "India";

const continent = "Asia";

let population = 150; // In millions

const language = "English";

// Compare with Finland's population (6 million)

const isMoreThanFinland = population > 6;

console.log("Does", country, "have more people than Finland?", isMoreThanFinland);

Ans: true

4. The average population of a country is 33 million people. Does your country have less people than the average country?

const country = "India";

const continent = "Asia";

let population = 150; // In millions

const language = "English";

// Check if population is less than the average (33 million)

const isLessThanAverage = population < 33;

console.log("Does", country, "have less people than the average country?", isLessThanAverage);

Ans: false

5. Based on the variables you created, create a new variable 'description' which contains a string with this format: 'Portugal is in Europe, and its 11 million people speak portuguese'

const country = "India";

const continent = "Asia";

let population = 150; // in millions

const language = "English";

// Create a descriptive sentence

const description = `${country} is in ${continent}, and its ${population} million people speak ${language}.`;

console.log(description);

India is in Asia, and its 150 million people speak English.

**LECTURE: Taking Decisions: if / else Statements**

1. If your country's population is greater that 33 million, log a string like this to the console: 'Portugal's population is above average'. Otherwise, log a string like 'Portugal's population is 22 million below average' (the 22 is the average of 33 minus the country's population)

const country = "India";

const continent = "Asia";

const language = "Hindi";

let population = 1417; // in millions

const averagePopulation = 33; // average in millions

if (population > averagePopulation) {

console.log(`${country}'s population is above average.`);

} else {

const difference = averagePopulation - population;

console.log(`${country}'s population is ${difference} million below average.`);

}

India's population is above average.

2. After checking the result, change the population temporarily to 13 and then to 130. See the different results, and set the population back to original

// 2. Temporarily change population to 13

population = 13;

if (population > averagePopulation) {

console.log(`${country}'s population is above average.`);

} else {

const difference = averagePopulation - population;

console.log(`${country}'s population is ${difference} million below average.`);

}

// Change population to 130

population = 130;

if (population > averagePopulation) {

console.log(`${country}'s population is above average.`);

} else {

const difference = averagePopulation - population;

console.log(`${country}'s population is ${difference} million below average.`);

}

// Set population back to original

population = 1417;

**LECTURE: Equality Operators: == vs. ===**

1. Declare a variable 'numNeighbours' based on a prompt input like this: prompt('How many neighbour countries does your country have?');

let numNeighbours = prompt('How many neighbour countries does your country have?');

2. If there is only 1 neighbour, log to the console 'Only 1 border!' (use loose equality == for now)

if (numNeighbours == 1) {

console.log('Only 1 border!');

}

3. Use an else-if block to log 'More than 1 border' in case 'numNeighbours' is greater than 1

else if (numNeighbours > 1) {

console.log('More than 1 border');

}

4. Use an else block to log 'No borders' (this block will be executed when 'numNeighbours' is 0 or any other value)

else {

console.log('No borders');

}

5. Test the code with different values of 'numNeighbours', including 1 and 0.

"1" → Logs 'Only 1 border!'

"0" → Logs 'No borders'

6. Change == to ===, and test the code again, with the same values of 'numNeighbours'. Notice what happens when there is exactly 1 border! Why is this happening?

if (numNeighbours === 1) {

console.log('Only 1 border!');

} you input "1", **nothing happens**,

7. Finally, convert 'numNeighbours' to a number, and watch what happens now when you input 1

let numNeighbours = Number(prompt('How many neighbour countries does your country have?'));

if (numNeighbours === 1) {

console.log('Only 1 border!');

} else if (numNeighbours > 1) {

console.log('More than 1 border');

} else {

console.log('No borders');

}

Now "1" will be converted to 1 (number)

**LECTURE: Logical Operators**

Comment out the previous code so the prompt doesn't get in the way

// let numNeighbours = Number(prompt('How many neighbour countries does your country have?'));

2. Let's say Sarah is looking for a new country to live in. She wants to live in a country that speaks english, has less than 50 million people and is not an island.

const country = "India";

const language = "Hindi";

const population = 1417; // in millions

const isIsland = false;

3. Write an if statement to help Sarah figure out if your country is right for her. You will need to write a condition that accounts for all of Sarah's criteria. Take your time with this, and check part of the solution if necessary.

if (language === "English" && population < 50 && !isIsland) {

console.log(`You should live in ${country} :)`);

} else {

console.log(`${country} does not meet your criteria :(`);

}

 4. If yours is the right country, log a string like this: 'You should live in Portugal :)'. If not, log 'Portugal does not meet your criteria :('

5. Probably your country does not meet all the criteria. So go back and temporarily change some variables in order to make the condition true (unless you live in Canada :D)

const country = "India";

const language = "English";

const population = 45;

const isIsland = false;

if (language === "English" && population < 50 && !isIsland) {

console.log(`You should live in ${country} :)`);

} else {

console.log(`${country} does not meet your criteria :(`);

}

OUTPUT :You should live in India :)

**LECTURE: The switch Statement**

If your country's population is greater than 33 million, use the ternary operator to log a string like this to the console: 'Portugal's population is above average'. Otherwise, simply log 'Portugal's population is below average'. Notice how only one word changes between these two sentences!

const country = "India";

const population = 1417; // in millions

const averagePopulation = 33; // in millions

console.log(`${country}'s population is ${population > averagePopulation ? "above" : "below"} average.`);

India's population is above average.

After checking the result, change the population temporarily to 13 and then to 130. See the different results, and set the population back to original

const country = "India";

const averagePopulation = 33; // in millions

// Test with population = 13

let population = 13;

console.log(`${country}'s population is ${population > averagePopulation ? "above" : "below"} average.`);

// Test with population = 130

population = 130;

console.log(`${country}'s population is ${population > averagePopulation ? "above" : "below"} average.`);

// Set population back to original

population = 1417;

console.log(`${country}'s population is ${population > averagePopulation ? "above" : "below"} average.`);

India's population is below average.

India's population is above average.

India's population is above average.