Learner Assignment Submission Format

Learner Details

- **Name: Nikil G S**
- **Enrollment Number:----**
- **Batch / Class:**
- **Assignment: (Bridge Course Day 1)**
- **Date of Submission:28/6/2025**

1st question

Problem Solving Activity 1.1

1. **Program Statement**
   I learned from this question. I need to write a program on our age and name and take as a input. I will write a program output like a
   "HELLO NIKIL, YOU ARE 22 YEARS OLD."

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2. **Algorithm**
   1. start
   2. use the prompt to enter the user name
   3. store the name in the variable
   4. use the prompt to enter the user age
   5. store the age in the variable
   6. display the out like " HELLO NIKIL, YOU ARE 22 YEAR OLD."
   7. End

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3. **Pseudocode**
   1 start
   2 display "Enter your name"
   3 read name
   4 display "Enter your age"
   5 read age
   6 set greeting to "hello Nikil you are 22 year old"
   7 End

4. Program Code

```
let name  =  prompt("Enter your name");

let age  =  prompt ("Enter your age");

alert("Hello " + name + ", you are " + age + " years old.");
```

5. Test Cases

Present a table of test cases you used to validate your program. Include a mix of regular, boundary, and edge cases.

Test Case No.	Input	Expected Output	Actual Output	Status (Pass/Fail)
1	Nikil	“hello Nikil you are 22 year old”	“hello Nikil you are 22 year old”	Pass
2	Age			
3				

6. Screenshots of Output

Enter your name Nikil

Enter your age 22

Hello Nikil, you are 22 years old.

7. Observation / Reflection

my challenges are, I made mistake in write the program in 3rd line. I was wrote greeting in capital letter without proper indications.

2nd question

Problem Solving Activity 1.2

I learned from this question. I need to write a program on two numbers and convert their integers and their sum, product and difference

Algorithm

1. Start
2. Take two numbers as input
3. Convert their integers
4. Calculate the sum and product of each number
5. Print their final result
6. End

Pseudocode

1. Start
2. Display the two numbers
3. Display their converted integer
4. Analyze above (2 and 3)
5. Set what we calculate
6. End

Program Code

```
let input1 = prompt("Enter the first number");

let input2 = prompt("Enter the second number");

let num1 = parseInt(input1);

let num2 = parseInt(input2);

let sum = num1 + num2;

let product = num1 * num2;

alert("sum" + sum);

alert("product" + product);
```

Test Cases

	Input	Expected Output	Actual Output	Status (Pass/Fail)
1	First number 5	Sum = 11 Product = 30	Sum = 11 Product = 30	Pass
2	Second number 6			
3				

Screenshots of Output

Enter the first number5

Enter the second number6

sum11

product30

Observation / Reflection

I made mistake in printing the result

3rd question

Program Statement

I learned from this question. Convert these "123",123.45,123,True,"Hello" data types into computer language or identify the particular statement

Algorithm

"123" string

123.45 float

123 number

true Boolean

“Hello” string

Observation / Reflection

I don’t have any challenges

4th question

Program Statement

We need converts Celsius to Fahrenheit by using the formula

Algorithm

1. Start
2. Declare a variable to store Celsius temperature
3. Use the formula `F = (C × 9/5) + 32` to convert Celsius to Fahrenheit
4. Store the result in a variable
5. Display the Fahrenheit temperature
6. End

Pseudocode

takes a temperature in Celsius as input, applies the conversion formula, and returns the equivalent temperature in Fahrenheit**.**

Program Code

```
let celsius = 30; // You can change this value
let fahrenheit = (celsius * 9/5) + 32;
console.log(celsius + "°C is equal to " + fahrenheit + "°F");
```

Test Cases

	Input	Expected Output	Actual Output	Status (Pass/Fail)
1	Celsius=30	30°C is equal to 86°F	30°C is equal to 86°F	pass
2				
3				

Screenshots of Output

30°C is equal to 86°F

Observation / Reflection

The function handles both positive and negative Celsius values, as well as extreme temperatures like 0 and 100 degrees Celsius.

5th question

Program Statement

Create a basic calculator that performs addition, subtraction, multiplication, and division between two user-provided numbers.

Algorithm

1. Start
2. Input two numbers, num1 and num2, from the user.
3. Input an operator (+, -, *, /) from the user.
4. Check the operator:

5. Display the result (if valid).

6. End

Pseudocode

1. START
2. Input num1
3. Input operator
4. End

Program Code

```
let num1 = parseFloat(prompt("Enter the first number:"));
let num2 = parseFloat(prompt("Enter the second number:"));
let operator = prompt("Enter operator (+, -, *, /):");
let result;
if (operator === "+") {
    result = num1 + num2;
} else if (operator === "-") {
    result = num1 - num2;
} else if (operator === "*") {
    result = num1 * num2;
} else if (operator === "/") {
    if (num2 !== 0) {
        result = num1 / num2;
    } else {
        result = "Error: Division by zero";
    }
} else {
    result = "Invalid operator";
}
console.log("Result: " + result);
```

Test Cases

	Input	Expected Output	Actual Output	Status (Pass/Fail)
1	3 (operator +)	8	8	Pass
2	5	-	-	
3				

Screenshots of Output

Enter the first number:3

Enter the second number:5

Enter operator (+, -, *, /):+

Result:

Observation

he calculator program works as expected, performing addition, subtraction, multiplication, and division operations correctly. It handles division by zero and invalid operators, providing informative error messages

6th question

Program Statement

Using if-else statement find the number even or odd.

Algorithm

1. Start
2. Accept a number from the user
3. Check if the number is divisible by 2
4. Print the result

5. End

Pseudocode

1.START

2.PROMPT user to enter a number

3.EAD number

4.END

Program Code

```
let number = prompt("Enter a number:");
number = parseInt(number);
if (number % 2 === 0) {
    console.log("The number is Even");
} else {
    console.log("The number is Odd");
}
```

Test Cases

	Input	Expected Output	Actual Output	Status (Pass/Fail)
1	3	The number is Odd	The number is Odd	Pass
2				
3				

Screenshots of Output

The number is Odd

Observation

1. remainder of division
2. Conditional statement used for decision making
3. Method used to take user input in JavaScript
4. Converts string input to integer in JavaScript
5. returns the remainder of a division

7th question

Program Statement

accepts two numbers from the user and prints Which number is greater, **or**If the numbers are equal.

Pseudocode

1. Start
2. Accept two numbers from the user
3. Compare the two numbers:
4. End

Program Code

```
let num1 = parseInt(prompt("Enter the first number:"));
let num2 = parseInt(prompt("Enter the second number:"));
if (num1 > num2) {
   console.log("First number is greater");
} else if (num2 > num1) {
   console.log("Second number is greater");
} else {
   console.log("Both numbers are equal");
}
```

Test Cases

	Input	Expected Output	Actual Output	Status (Pass/Fail)
1	First number 6	7 greater than 6	7 greater than 6	Pass
2	Second number is 7	-	-	
3				

Screenshots of Output

Enter the first number:6

Enter the second number:7

Second number is greater

Observation

1.The program uses basic conditional logic

2. It handles all scenarios

3. It uses prompt() to take input and parseInt() to convert input from string to integer.

4. This logic works for positive, negative, and zero values.

8th question

Problem statement

we need to print the numbers using the while loop count down 10 to 1.

Pseudocode

1. Start
2. Set num = 10
3. Print num
4. End while
5. End

Program Code

```
let num = 10;

while (num >= 1) {

   console.log(num);

   num--; // Decrease by 1

}
```

Test Cases

	Input	Expected Output	Actual Output	Status (Pass/Fail)
1	10,1,--	10 to 1	10 to 1	Pass
2				
3				

Screenshots of Output

10

9

8

7

6

5

4

3

2

1

Observation

Works for countdowns and reverse sequences.

9th question

Program statement

1. Start
2. Accept a number from the user
3. Use a for loop
4. Multiply the input number
5. End

Pseudocode

1. Start
2. User to enter the number
3. Read the number
4. End
5. End

Program Code

```
let num = parseInt(prompt("Enter a number to print its multiplication table:"));
for (let i = 1; i <= 10; i++) {
    console.log(`${num} x ${i} = ${num * i}`);
}
```

Test Cases

	Input	Expected Output	Actual Output	Status (Pass/Fail)
1	9	9*1=9 to 9*10=90	9*1=9 to 9*10=90	Pass
2				
3				

Screenshots of Output

Enter a number to print its multiplication table:9

9 x 1 = 9

9 x 2 = 18

9 x 3 = 27

9 x 4 = 36

9 x 5 = 45

9 x 6 = 54

9 x 7 = 63

9 x 8 = 72

9 x 9 = 81

9 x 10 = 90

Observation

The program uses a for loop to iterate from 1 to 10.

It multiplies the user's input with each i and prints in the format "num x i = result"