- Explain all data types with examples.

Answer:- basically there are two type of dats type :

1.PRIMITIVE AND 2.NON-PRIMITIVE

- 1.PRIMITIVE : in primitive we have

• String = in string anything we write in quotes like “rahul”,”123”.these are string.[generally use for the characters}.

• Number = numerical value comes like integer and float.

• Boolean= just insure that our condition is true or false.

• Undefined= value present but can’t define.

• Null = nothing value comes.

• Symbol = The symbol data type in JavaScript defines a property of an object which is private to the object. The value with the Symbol data type can be referred to as a symbol value. The symbol refers to the ‘key’ of the key-value pair of an object. Every symbol is unique. Two symbols with the same key values are not the same.

```
let Name= "Rahul Kumar";
let time = "11:02 AM";
let c=45;
let d=46.7
console.log(typeof c)
//2.string=> collection of character (normal text)
//string can be written in single '' or double qoutes ''
let e='rahul'
let f="pawan"
console.log(typeof e)
//3.boolean => represent a state (true/false)
let g=true
let h=false
console.log(e,typeof g)
//4.bigInt =>
let i=2324534545675787989890n
console.log(typeof i)
//5.symbol
let symbol1=Symbol('a')
console.log(symbol1)
let symbol2=Symbol('a')
console.log(symbol1==symbol2)
console.log(typeof symbol1)
//6.undefined =>when variable is not initialised
let j;
let k=undefined
console.log(typeof j)
//7.null =>
let l=null
console.log(typeof null)
```

• What is variable, how to create a variable?

Answer : so variable is like a storage container it means we use so for assign the value ,

Like let x = 4;

Here x is variable and we assign that 4 its value or I means 4 store in x address ,

Console.log (x);

• Explain all operators with an example

Answer : So operators

1. Arithmetic Operators = HERE +,-,*,/,% are come

```
Let x =5;
Let b = 4;
Let c = x+b;
Console.log(X+b);

 Let x-=4;
Console.log(x);
Let b*=4;
Console.log(x);


Let x/=2
Console.log(x);


Let c%=3;
Console.log(c);
```

2. Assignment Operators => = (this is a assignment operator) there are +=,-=,*=,%=

```
Let x =5;

Let b = 4;

    Let c = x+b;
    Let x +=3;
    Console.log (x);
    Console.log(X+b);

     Let x-=4;
    Console.log(x);
    Let b*=4;
    Console.log(x);


    Let x/=2
```

```
Console.log(x);


Let c%=3;
Console.log(c);
```

3. Comparison Operators =
   Comparison operators in JavaScript are used to compare two values and return a Boolean (true or false) based on whether the comparison is true or false. Here are the main comparison operators:

   1. Equal (==)
   Compares two values for equality, after converting both values to a common type (type coercion).

```
console.log(5 == '5'); // true
console.log(5 == 5); // true
console.log(5 == 6); // false
```

   2. Not Equal (!=)
   Compares two values for inequality, after converting both values to a common type (type coercion).

```
console.log(5 != '5'); // false
console.log(5 != 5); // false
console.log(5 != 6); // true
```

   3. Strict Equal (===)
   Compares two values for equality without converting their types (no type coercion).

```
console.log(5 === '5'); // false
console.log(5 === 5); // true
console.log(5 === 6); // false
```

   4. Strict Not Equal (!==)
   Compares two values for inequality without converting their types (no type coercion).

```
console.log(5 !== '5'); // true
console.log(5 !== 5); // false
console.log(5 !== 6); // true
```

   5. Greater Than (>)
   Checks if the value on the left is greater than the value on the right.

```
console.log(5 > 3); // true
console.log(5 > 5); // false
console.log(5 > 6); // false
```

   6. Greater Than or Equal (>=)
   Checks if the value on the left is greater than or equal to the value on the right.

```
console.log(5 >= 3); // true
console.log(5 >= 5); // true
console.log(5 >= 6); // false
```

7. Less Than (<)

Checks if the value on the left is less than the value on the right.

```
console.log(5 < 3); // false
console.log(5 < 5); // false
console.log(5 < 6); // true
```

8. Less Than or Equal (<=)

Checks if the value on the left is less than or equal to the value on the right.

```
console.log(5 <= 3); // false
console.log(5 <= 5); // true
console.log(5 <= 6); // true
```

3.Logical Operators = there are three types of logical operators

1. AND (&&)

Comparison of both condition if both condition is true the print true but there is only one condition is true and is false so it will be false .

```
Let x = 10;

Let b = 10;

Console.log(X=B);
```

2. OR (||)
   IN THIS operator if only or both condition are true then it will print true .

```
let x = 5;

let y = 10;


if (x > 3 || y < 5) {

  console.log('One or both conditions are true.');

} else {

  console.log('Both conditions are false.');

}

// Outputs: "One or both conditions are true."
```

3. NOT (!)

It reverse the actual value it means if there is true in condition it become false and vice versa.

```
 let isTrue = true;
let isFalse = false;

console.log(!isTrue);  // Outputs: false
console.log(!isFalse); // Outputs: true
```