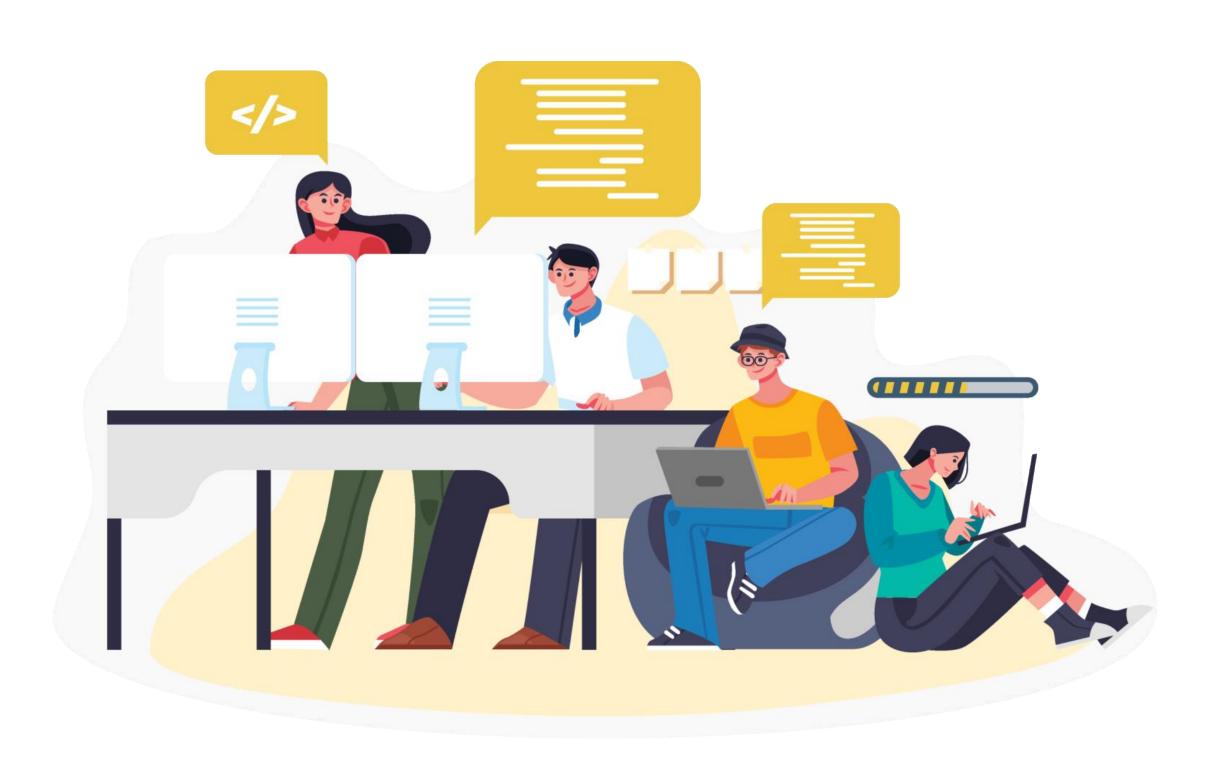


EP 4: Numbers, Number Methods, Math and Random





Numbers





```
1 let x = 3.14;  // A number with decimals
2 let y = 3;  // A number without decimals
```



```
1 let x = 123e5; // 12300000
2 let y = 123e-5; // 0.00123
```







```
1 let x = 123;
2 x.toString();  // returns 123 from variable x
3 (123).toString();  // returns 123 from Literal 123
4 (100 + 23).toString();  // returns 123 from expression 100 + 23
```



```
1 let x = 9.656;
2 x.toExponential(2);  // returns 9.66e+0
3 x.toExponential(4);  // returns 9.6560e+0
4 x.toExponential(6);  // returns 9.656000e+0
```



```
1 let x = 9.656;
2 x.toPrecision();  // returns 9.656
3 x.toPrecision(2);  // returns 9.7
4 x.toPrecision(4);  // returns 9.656
5 x.toPrecision(6);  // returns 9.65600
```





Global JavaScript Methods

JavaScript global methods can be used on all JavaScript data types.

These are the most relevant methods, when working with numbers:

Method	Description
Number()	Returns a number, converted from its argument.
parseFloat()	Parses its argument and returns a floating point number
parseInt()	Parses its argument and returns an integer



Number Properties

Property	Description
MAX_VALUE	Returns the largest number possible in JavaScript
MIN_VALUE	Returns the smallest number possible in JavaScript
POSITIVE_INFINITY	Represents infinity (returned on overflow)
NEGATIVE_INFINITY	Represents negative infinity (returned on overflow)
NaN	Represents a "Not-a-Number" value



Math





```
• • •
1 Math.E
          // returns Euler's number
2 Math.PI
          // returns PI
  Math.SQRT2 // returns the square root of 2
  Math.SQRT1_2 // returns the square root of 1/2
  Math.LN2 // returns the natural logarithm of 2
6 Math.LN10
              // returns the natural logarithm of 10
              // returns base 2 Logarithm of E
  Math.LOG2E
8 Math.LOG10E // returns base 10 Logarithm of E
```



Number to Integer

There are 4 common methods to round a number to an integer:

Math.round(x)	Returns x rounded to its nearest integer
Math.ceil(x)	Returns x rounded up to its nearest integer
Math.floor(x)	Returns x rounded down to its nearest integer
Math.trunc(x)	Returns the integer part of x (<u>new in ES6</u>)



Random





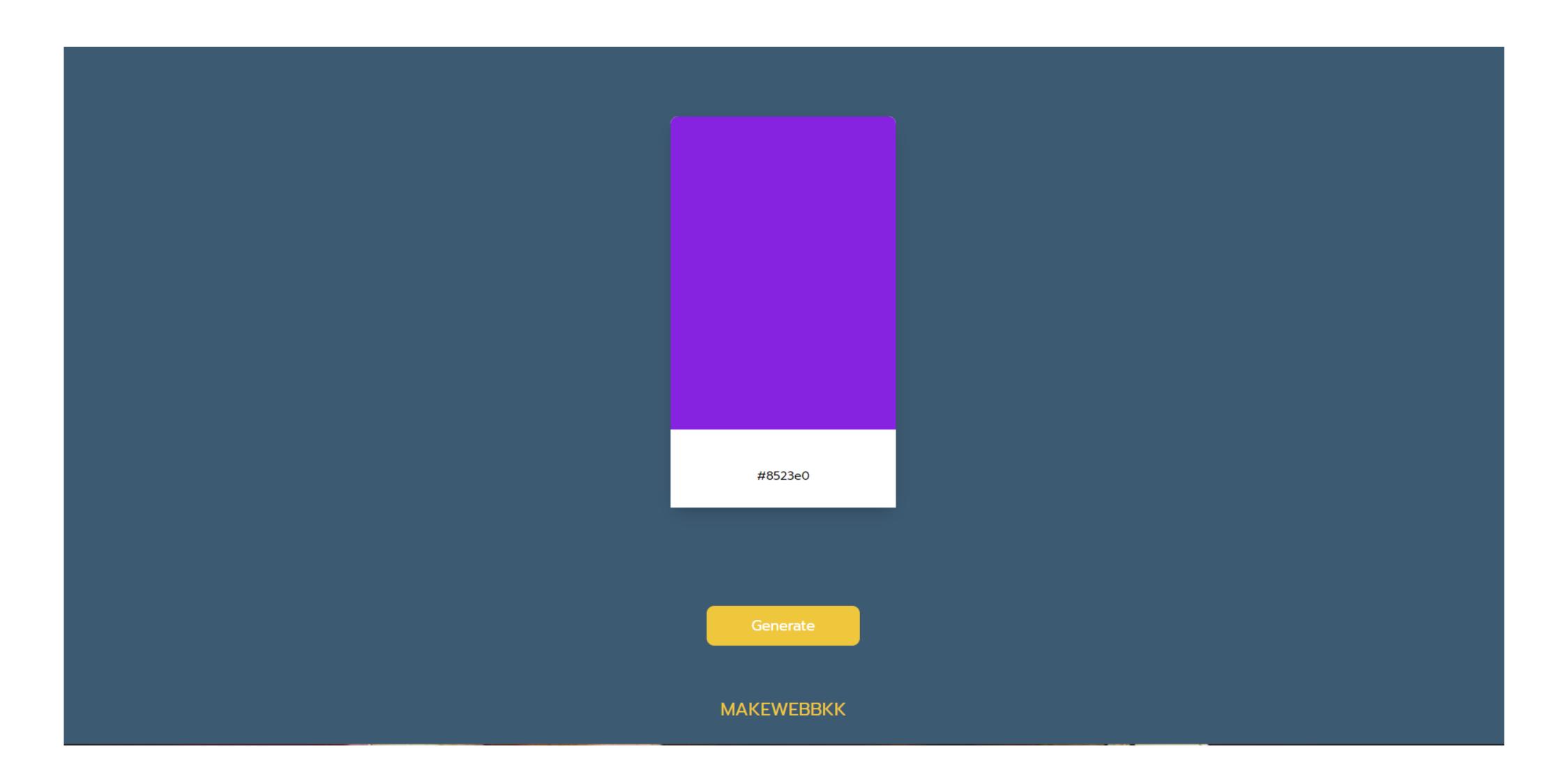
```
Math.random(); // Returns a random number
Math.floor(Math.random() * 10); // Returns a random integer from 0 to 9
Math.floor(Math.random() * 11); // Returns a random integer from 0 to 10
Math.floor(Math.random() * 100); // Returns a random integer from 0 to 99
Math.floor(Math.random() * 101); // Returns a random integer from 0 to 100
Math.floor(Math.random() * 10) + 1; // Returns a random integer from 1 to 10
Math.floor(Math.random() * 100) + 1; // Returns a random integer from 1 to 100
```



Let's make a Color Pallette









Next, We will see about Numbers, Number Methods, Math and some mini project



SEE YOU SOON ...