Timers And Intervals :

So ham yahan par ham ye cheezain parhengay and so on orr b cheezain = setTimeOut, setInterval, clearTimeout, clearInterval

So basically jab b hm timeout ya koi intervals ki baat krtay hain tu iss ka basic concept jo hota hai wo ye hota hai k for eg ham nay koi kaam krna hai tu wo 10 sec k baad krta hai tu hm ye user ko dhika detay hain k this will done in 10 sec orr jab 10 sec guzar jatay hain tu wo kaam ho jata hai. Also for eg ham kahtay hain k your download will start in 5min or wo 5min k baad wo start ho jata hai tu iss tarah kii cheezain ham kartay hain yahan timer and intervals mein.

SetTimeOut:

For eg ham nay hello print krna hai console mein magar wo kuch time baad print ktna hai. Tu agar ham nay console.log mein simple console.log(“hello”) likh liyaa tu ye tu use time print kr dega . magar agar humein kuch time baad print krwana hai tu phirr ham use karengay setimeout

Tu setTimeout() aik function hai jo k aik orr function ko accept krta hai orr 2nd time mangta hai k kitni time baad ye kaam krwana hai jaisay k hm nay koi hello kitnay time baad print krwani hai tu utna time ham dengay orr jo time ham dengay tu wo milliseconds mein dengay tu 1 second mein 1000 milliseconds hotay hain.

setTimeout(function () {

  console.log("print after 5 seconds");

}, 5000);

Tu ab ye function jo hai wo 5 seconds k baad iss console ko print krwa dega.

setInterval:

tu basically jo main difference hai setInterval and setTimeout mein wo ye hai k for eg ham nay setTimeout laga liyaa hai 5 sec k baad tu ye 5 seconds k baad chalega orr 1 dafa chal jaye gal orr bss. Magar jo ye setInterval hai ye baar baar chalta hii ragay ga matlab k agar ham nay koi setInterval laga liyaa hai 5 seconds k baad to wo 5 sec k baad chal jaye ga orr dobara 5 sec k baad dobara chalega orr phirr 5 sec k baad dobara and so on ye chalta hi rahega ye band nai hoga bss ye main difference hai. Iss k code mein koi change nai hai ye b aik function hai sari cheezain same hai.

setInterval(function () {

  console.log("setInterval print after 5 seconds");

}, 5000);

clearTimeout:

cleartimeout ka matlab hai k for eg humara koi timeout hai jiss ko ham hatana chahtay hain tu uss k liyee ham use kr sktay hain clearTimeout. Tu cleartimeout ka use krnay k liyee ham jo karengay wo ye k jo setimeout ham nay liyaa hoga uss ko pahlay ham koi b variable mein save karengay orr phirr uss variable ko ham cleartimeout mein put karengay tu wo jo b setTimeout hoga phirr wo nai chalega matlab clear ho jaye ga hatt jaye ga. Like for eg

let abc = setTimeout(function () {

  console.log("timeout after 5 sec");

}, 3000);

clearTimeout(abc);

tu ab ye jo cleartimeout hai ye iss setTimeout ko clear kr dega.

clearInverval:

same logic works with clear interval only we will use clearInterval and done.

let defg = setInterval(function () {

  console.log("interval after 3 sec");

}, 3000);

clearInterval(defg);

tu basically is k uses ye hain k jaisay hm nay koi countdown banaya hai orr uss nay 0 tak chalna hai magar jab wo 0 tak ata hai tu wo minus mein chala jata hai jo k hm nai chahtay tu ham nay yahan prr siraf ye condition likhii hai k agar 0 tak ajata hai tu aap nay interval ko clear kar dena hai matlab k bss stop ho jao.. here is the code.

let intervall = setInterval(function () {

  if (count >= 1) {

console.log(count);

    count--;

  } else clearInterval(intervall);

}, 1000);

Example :

let count = 0;

let progress = document.querySelector(".progress-bar");

let progressText = document.querySelector("#progress-text");

setInterval(function () {

  if (count < 100) {

    count++;

    progress.style.width = `${count}%`;

    progressText.textContent = `${count}%`;

  }

}, 10000 / 100);

Ham nay yahan prr aik example k liyee aik progress bar dhiknaa hai jo k line complete ho tu ham nay count liyaa hai jo k 0 say start hoga. Ye jo query selector mein ham nay .progress-bar likhaa hai ye html mein aik class and ids etc likhii siraf un ko select kiyaa hai. Iss mein aik orr field hai progress bar ki field tu ham nay siraf uss ko select kr li.

Ab ham nay setInterval lagaya hai orr uss mein ham nay count ko 100 tak pohanchana hai tu ham nay interval laga liya orr uss mein time de diyaa milliseconds mein. Count ko ham nay ++ kr liyaa takay wo barhta rahay. Bss siraf ham nay jo progress ki jo baar thi uss ko select krr liyaa orr us mein jo abii change honay wali hai real value hai count uss ko put kr liya tu wo change hoti rahay gi orr uss k neechay ham nay percent text likhaa hai k matlab kitna percent download huaa hai tu wahan prr b likh liyaa uss count ko.

Ye jo neechay ham nay 10000/100 likhaa hai iss ki logic ye hai ham nay iss progress bar ko end krwana hai 10s mein tu ham nay 10000 likhh liyaa orr iss ko divide by 100 iss liyee kiyaa hai qk ham nay count yani k steps hi 100 lenay hain tu iss liyee ham nay 100 likh liyaa tu ye ab khud apnay hisaab say jitney hii milliseconds likhnaa ho wo yahan aatay jayengay matlab k 10s mein humay complete krwana thaa and 100 steps hi lenay thay tu iss liye.

Ya phirr ham iss tarah b kr sktay hain k for eg agar hm yahan prr confuse ho rahay hain iss mein k kitnay milliseconds likhnay hain etc tu ham iss tarah b kr sktay hain like

let count = 0;

let mseconds = 10;

let progress = document.querySelector(".progress-bar");

let progressText = document.querySelector("#progress-text");

setInterval(function () {

  if (count < 100) {

    count++;

    progress.style.width = `${count}%`;

    progressText.textContent = `${count}%`;

  }

}, (mseconds\*1000) / 100);

Tu bass ab humein jitney b seconds mein iss line ko complete krna haii siraf seconds mein seconds ko change karengay orr bs.

Confusion Topics :

Ye kabi kabar question hota hai k kab setInterval and setTimeout ka use krna hai tu jab b humein koi cheez bar bar chalaani hai matlab k ye hoti rahay tu humein setInterval ka use krna hai orr jab humein koi cheez aisee chahiyee k bss aik dafa ho jaye orrr bss phir khatam tu phirr setTimeout ka use krna hai