

XMLHttpRequest or XHR

- XMLHttpRequest / XHR
- XMLHttpRequest aita ekta data type, and format, aita browser er buildin ekta feature
- Akhon JSON er maddome data pass hoi er age XML er maddome dat pass hoto age XML populer chilo, akhon JSON populer
- Node js Ekta run time, request er jonno tar module ase
- Browser er khatre XMLHttpRequest er maddome request hoi, aita amder provide kore browser run time
- Request adan prodan er khatre shudu XML na she json, http, text, html aro onek data type e she handle korte pare

```
//Example 1
//2 ta button k nibo mane get korbo
// GetButton diya extranl data niya ashbo & Send button diya extranl kothao data pathiya dibo
const getButton = document.getElementById('get-button');
const sendButton = document.getElementById('send-button');
//Line duplicate command Shift+ALT+Up/Down key

const getData = function() { //data get er jonno code likbo
  const xhr = new XMLHttpRequest(); //xhr name ekta notun request object banalam

  //request k prepare korer jonno xhr a property add korbo
  //open holo ami ki request chassi & kon url a hit korbe ai 2 ta paramiter nei
  xhr.open("GET", "https://jsonplaceholder.typicode.com/todos/1") //fake appi website: JsonPlaceholder
  //open diya request take prepare korlam
  // xhr.responseType = "json"; // aita kore dile real js object dibe
  xhr.send(); //aita browser a network a dekbo output

  //jai response ta pathalam shei response ta diya akhon amra kisu korbo ai jonno onload name ekta method ase
  xhr.onload = function() { //response er modda result pabo she response er modde result dai
    const result = xhr.response;
    console.log(result); //akhon console result pabo //result ta string er moto pure object na //aita diya kaj kora
    jabe na
    console.log(JSON.parse(result)); //Akhon pure js object
    //Json.parse diya real js object a convert korte pari
  }
};

const sendData = function() {};

//Button a click korte pari addEventListener er maddome
//Fast parameter ki event listen korte chassi, 2nd parameter click hole kon function k linten korbe ta dite hoi
getButton.addEventListener("click", getData);
getButton.addEventListener("click", sendData);


//Example 1 with refactor

//refactor korbo uporer code k karon ekta function create korley get,post 2 tar jonno e use korte parbo

const getButton = document.getElementById('get-button');
const sendButton = document.getElementById('send-button');

//ai tukor code er refactor niche
```

```

// const sendRequest = function (method, url) {
//     const xhr = new XMLHttpRequest();
//     xhr.open(method, url);
//     xhr.responseType = "json";
//     xhr.send();

//     xhr.onload = function() {//aita response power porer gotona so aita k ai khane rakher mane hoi na ai khon thaka
//         //ekta promise return kore dibo
//         const result = xhr.response;
//         console.log(result);
//     };
// };

const sendRequest = function (method, url, data) { //sendRequest ja kono request pathare shomvob // function er kono
parameter er value na dile shita undefine pai , data er value nai ai Get er khetre so tokhon she undefine
    const promise = new Promise((resolve, reject) => {
        const xhr = new XMLHttpRequest();
        xhr.open(method, url);
        xhr.responseType = "json";
        xhr.setRequestHeader("Content-
Type", "application/json");//amra meta tag add kore dite pari nijera jeta pathate hoi request er header a so ai khane o
tai kora holo take content type json pathiya dewa holo
        xhr.send(data);

        xhr.onload = function() { //on load er modda o application secifique error thakte pare so amk ai jaigai shai error ta
dorte hobe
            if (xhr.status >=400) { //400 theke error
                reject(xhr.response);
            } else {
                resolve (xhr.response);
            }
        };

        xhr.onerror = function() { //onload er onerror er ekta property //xhr handle korer shomoimamra function er callback
er modda pabo na xhr er propertyer modda pabo onload, onerror
            reject("Something was wrong");//onerror call hoi tokhon e jodi request pahate or net er kono error hoi
        }

    });
    return promise; //return koesi so akhon ja kono function er modda promise.then call korte pari
};

const getData = function() { //sendRequest k ai khane call kore dilam aita ekta promise return kore
    sendRequest("GET", "https://jsonplaceholder.typicode.com/todos/1")
    //then a response data pabo
    .then((responseData) => {
        console.log(responseData);

    });
};

const sendData = function() {
    sendRequest("POST", "https://jsonplaceholder.typicode.com/posts", JSON.stringify({

    })); //server shudu flat/pure json data receive kore //json.stringify na korle she a ekta object
    //then er modda response data pabo
    .then((responseData) => {
        console.log(responseData);

    })
    .catch((err) => {
        console.log(err);
    })
};

getButton.addEventListener("click", getData);
sendButton.addEventListener("click", sendData);

```