const UPPER\_LETTERS = ["A", "B", "C", "D", "E", "F", "G", "H", "I", "J", "K", "L", "M", "N", "O", "P", "Q", "R", "S", "T", "U", "V", "W", "X", "Y", "Z"];

const LOWER\_LETTERS = ["a", "b", "c", "d", "e", "f", "g", "h", "i", "j", "k", "l", "m", "n", "o", "p", "q", "r", "s", "t", "u", "v", "w", "x", "y", "z"];

const SYMBOLS = ["!", "@", "#", "$", "%", "^", "&", "\*", "(", ")", "-", "\_", "+", "=", "{", "}", "[", "]", "|", ":", ";", "'", "<", ">","?", "/", "~"];

let requiredLength = 9;

let hasLower = false;

let hasUpper = false;

let hasNumber = false;

let hasSymbol = true;

function getRandomLower() {

return LOWER\_LETTERS[Math.floor(Math.random() \* LOWER\_LETTERS.length)];

}

function getRandomUpper() {

return UPPER\_LETTERS[Math.floor(Math.random() \* UPPER\_LETTERS.length)];

}

function getRandomNumber() {

return Math.floor(Math.random() \* 10);

}

function getRandomSymbol() {

return SYMBOLS[Math.floor(Math.random() \* SYMBOLS.length)];

}

let password = "";

if (hasLower){password += getRandomLower()};

if (hasUpper) {password += getRandomUpper()};

if (hasNumber) {password += getRandomNumber()};

if (hasSymbol) {password += getRandomSymbol()};

let numCharRemaining = requiredLength - password.length;

for (let charNum = 0; charNum < numCharRemaining; charNum++) {

const randomCharType = Math.floor(Math.random() \* 4);

switch (randomCharType) {

case 0:

if (hasLower) {

password += getRandomLower();

break;

}

case 1:

if (hasUpper) {

password += getRandomUpper();

break;

}

case 2:

if (hasNumber) {

password += getRandomNumber();

break;

}

case 3:

if (hasSymbol) {

password += getRandomSymbol();

break;

}

default:

if (hasLower) {

password += getRandomLower();

} else if (hasUpper) {

password += getRandomUpper();

} else if (hasNumber) {

password += getRandomNumber();

} else {

password += getRandomSymbol();

}

}

}

console.log(password);