// import package

const prompt = require("prompt-sync")();

const mongoose =require("mongoose");

// Enter the user name

var username = prompt("Enter your name: ")

var rand, attempts = 0;

do{

// Generate random number.

var rand = (Math.random()\*10000).toFixed(0);

// create a set to remove duplicates.

var s = new Set();

s.add(rand[0])

s.add(rand[1])

s.add(rand[2])

s.add(rand[3])

if(s.size == 4){

break;

}

}while(true)

console.log(rand)

// time start

var t0 = performance.now();

do{

attempts++;

var val = prompt("Enter the 4 digit number: ")

if(rand == val)

{

console.log("You won");

break;

}

var output=""

for(var i=0; i<rand.length; i++)

{

for(var j=0; j<val.length; j++)

{

if(val[i]==rand[j])

{

if(i==j)

{

output+="+"

}

else

{

output+="-"

}

}

}

}

console.log(output);

}while(true);

// time end

var t1 = performance.now();

const time = ((t1-t0)/60000)

console.log(`You complete the game in ${attempts} attempts`)

console.log("Time taken by "+ username+ " is "+time+" min.")

// Save the data in database

// 1. connecting to mongoose database

mongoose.connect("mongodb://127.0.0.1:27017/amit")

.then(()=>console.log("connected to mongo db"))

.catch(err => console.error("could not connect to mongodb...",err))

// 2. Define schema

const dataSchema = new mongoose.Schema({

username: String,

attempts: Number,

time: Number

});

// 3. create a model or class

const Data = mongoose.model("Data", dataSchema)

// 4. create a data in json Object

async function createData(){

const record = new Data(

{

"username": username,

"attempts": attempts,

"time" : time

}

);

const result = await record.save();

console.log(result);

}

createData();

**Test Case:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test Case ID | Test Case Description | Steps | Test Data | Expected Result | Actual Results | Status  (Pass/Fail) |
| T101 | Check whether the number given as input by the user is same as of auto generated number by program. | 1. Run the program 2. Input player name 3. Input number(s) 4. Verify given numbers match the random number | Name: Amit  Enter 4 digit number: 8695  Enter 4 digit number: 1472  Enter 4 digit number: 3654  Enter 4 digit number: 9843 | --  -  --  You Won  You complete the game in 4 attempts  Time taken by Amit is 0.1785627383331458 min | --  -  --  You Won  You complete the game in 4 attempts  Time taken by Amit is 0.1785627383331458 min | Pass |
| T102 | Check whether the number given as input by the user is same as of auto generated number by program. | 1. Run the program 2. Input player name 3. Input number(s) 4. Verify given numbers match the random number | Name: Smith  Enter 4 digit number: 7531  Enter 4 digit number: 9842  Enter 4 digit number: 9824 | ++--  You won  You complete the game in 3 attempts  Time taken by Smith is 0.27209571833411855 min. | ++--  You won  You complete the game in 3 attempts  Time taken by Smith is 0.27209571833411855 min. | Pass |
| T103 | Check whether the number given as input by the user is same as of auto generated number by program. | 1. Run the program 2. Input player name 3. Input number(s) 4. Verify given numbers match the random number | Name: Jugnoo  Enter 4 digit number: 7536  Enter 4 digit number: 2154  Enter 4 digit number: 2365  Enter 4 digit number: 9857  Enter 4 digit number: 2860 | -  +  ++  +  Win!!  You won  You complete the game in 5 attempts  Time taken by Jugnoo is 0.24464419666528703 min. | -  +  ++  +  Win!!  You won  You complete the game in 5 attempts  Time taken by Jugnoo is 0.24464419666528703 min. | Pass |