<script>

  // 3 ways to display value

  /\*

          console.log(value);

          alert("This is alert")

          document.write()

      \*/

  //Variables

  /\*

          How to declare variables

              let = change value when we need

              var = same as above

              const = Never Changed

              //declaration

              let variableName;

              // Value Assignments

              variableName = value;

              //Initialization

              let variableName = value;

              // Constant initialization

              const VARIABLE\_NAME = value;

              // Variables Naming Rule

              let \_name = "Ali";

              let $name = "Ali";

              let name = "Ali";

              let NAME = "Ali";

              let name1 = "Ali";

              let firstName = "Ali";

              //We Cannot use Reserved Keywords

              // Reserved are reserved by language we cannot use it as a

              variable name

              // Examples

              let let = "Ali";

              let var = "Ali";

              let return = "Ali";

              let break = "Ali";

              let continue = "Ali";

              let if = "Ali";

              let else = "Ali";

              let switch = "Ali";

              let while = "Ali";

              let do = "Ali";

              let for = "Ali";

              let in = "Ali";

              let typeof = "Ali";

              let finally = "Ali";

      \*/

  // Data Types

  /\*

          String : let name = "ali";

          Number : let age = 22;

          Boolean : let isTeenage = true;

          Null : let address = null;

          Undefined : let age;

          Symbol : let symbol = Symbol("Greeting");

          Object : const person = {name: "ali", age: 22};

          let name = "Ali";

          let age = 25;

          let isMarried = true;

          let address = null;

          let greeting;

          let symbol = Symbol("Greeting");

          let person = {

              name: "Ali",

              age: 25,

              address: {

                  street: "Street",

                  city: "City"

              }

          };

      \*/

  // Type Coercion (Type Casting)

  /\*

      // String to Number

          let name = "25";

          let age = Number(name);

          console.log(age);

          // Number to String

          let age = 25;

          let name = String(age);

          let name1 = age.toString();

          console.log(name);

          // Boolean to Number

          let isMarried = true;

          let isTeenage = Boolean(isMarried);

          console.log(isTeenage);

      \*/

  //    write a program for calculating Volumn, surface aera  of triangles

  let edges = prompt("Enter Vertex of triangle");

  edges = Number(edges);

  const volumn = edges \*\* 3;

  const surfaceAera = 6 \* (edges \*\* 2);

  const diagonal = Math.sqrt(3) \*edges;

  const a = Math.sqrt(volumn,3);

  console.log("Volumn of triangle: ", volumn);

  console.log("Surface Area of triangle: ", surfaceAera);

  console.log("Diagonal of triangle: ", diagonal);

  console.log("Area of triangle: ", a);

</script>

<script>

  // Selection Structure

  /\*

        if

        else if

        nested if

        switch

        conditional selection

    \*/

  // let age = Number( prompt("Enter your age: ") );

  // if( age >= 18 ){

  //     alert("You are eligible for voting.");

  // }

  // if( age < 18 )

  // {

  //     alert("You are not eligible for voting.");

  // }

  // let num = Number( prompt("Enter any number: ") );

  // if( num % 2 === 0){

  //     alert("The number is even.");

  // }

  // if( num % 2 === 1){

  //     alert("The number is odd.");

  // }

  // let weight = Number ( prompt("Enter your weight: "));

  // let height = Number ( prompt("Enter your height in foots: "));

  // // height = height \* 12;

  // height \*=12;

  // // height = height / 39.37;

  // height /=39.37;

  // console.log("heath in meter is:", height)

  // let bmi = weight / (Math.pow(height,2));

  // if(bmi < 18.5){

  //     alert("You are under weight: "+bmi)

  // }

  // if(bmi >= 18.5 && bmi < 24.9){

  //     alert("You are Healthy: "+bmi)

  // }

  // if(bmi >= 24.9 && bmi < 30){

  //     alert("You are over weight: "+bmi)

  // }

  // if(bmi >= 30){

  //     alert("You are in diseases: "+bmi)

  // }

  // method 1

  // if (Number( prompt("Enter number"))>0){

  //     alert("positive number")

  // }else{

  //     alert("negitive number")

  // }

  // if (Number( prompt("Enter number"))>0){

  //     alert("positive number")

  // }

  // if (Number( prompt("Enter number"))<0){

  //     alert("negitive number")

  // }

  let storeEmail = "hassnainazeem2@gmail.com";

  let storePassword = "pakistan123";

  let inputEmail = prompt("Enter Your Email");

  let inputPassword = prompt("Enter Your Password");

  if (storeEmail === inputEmail) {

    if (storePassword === inputPassword) {

      alert("Welcome Hassnain!");

    } else {

      alert("Your password is invalid");

    }

  } else {

    alert("Your email is invalid");

  }

</script>

<script>

  // let number= prompt("Enter a number of day");

  // console.log("Type of number before conversion", typeof number)

  // number = Number(number);

  // console.log("Type of number after conversion", typeof number)

  // if(number === 1){

  //   console.log("Today is Monday");

  // }

  // else if(number === 2){

  //   console.log("Today is Tuesday")

  // }

  // else if(number === 3){

  //   console.log("Today is Wednesday")

  // }

  // else if(number === 4){

  //   console.log("Today is Thursday")

  // }

  // else if(number === 5){

  //   console.log("Today is Friday")

  // }

  // else if(number === 6){

  //   console.log("Today is Saturday")

  // }

  // else if(number === 7){

  //   console.log("Today is Sunday")

  // }else{

  //   console.log("Invalid Day Number")

  // }

  // Condition base

  /\*

  teacher -> lectures > 0

  show lectures cards

  then

  you are new teacher

  \*/

  // if

  // let totalLectures =1;

  // if(totalLectures > 0){

  //   console.log("Show lectures cards")

  // }

  // if(totalLectures === 0){

  //   console.log("you are new teacher")

  // }

  // Take 3 numbers from user and show the largest number

  let num1 = prompt("Enter a number 1");

  num1=Number(num1);

  let num2 = prompt("Enter a number 2");

  num2=Number(num2);

  let num3 = prompt("Enter a number 3");

  num3=Number(num3);

  // console.log("This number is greater then"+ (num1>num2 && num1>num3?num1 : num2>num1 && num2 > num3 ? num2:num3) );

  if(num1>num2 && num1 > num2){

    console.log("This number is largest "+num1)

  }

  if(num2>num1 && num2 > num3){

    console.log("This number is largest "+num2)

  }

  if(num3>num1 && num3 > num2){

    console.log("This number is largest "+num3)

  }

</script>

<script>

  // three ways to declare variables

  /\*

    let -> value access,change any time

    var -> value access,change any time

    const -> value access but can't be changed

    \*/

  /\*

        Scopes

            //where we use variables

        function scope

        block scope

            if,loops

        global scope

        {

            let number;

        }

    \*/

  // 3 ways to display value

  /\*

          console.log(value);

          alert("This is alert")

          document.write()

    \*/

  //Variables

  /\*

          How to declare variables

              let = change value when we need

              var = change value when we need

              const = Never Changed

              //declaration

              let variableName;

              var variableName;

              // Value Assignments

              variableName = value;

              //Initialization

              let variableName = value;

              var variableName = value;

              // Constant initialization

              const VARIABLE\_NAME = value;

              // Variables Naming Rule

              let \_name = "Ali";

              let $name = "Ali";

              let name = "Ali";

              let NAME = "Ali";

              let name1 = "Ali";

              let firstName = "Ali";

              //We Cannot use Reserved Keywords

              // Reserved are reserved by language we cannot use it as a

              variable name

              // Examples

              let let = "Ali";

              let var = "Ali";

              let return = "Ali";

              let break = "Ali";

              let continue = "Ali";

              let if = "Ali";

              let else = "Ali";

              let switch = "Ali";

              let while = "Ali";

              let do = "Ali";

              let for = "Ali";

              let in = "Ali";

              let typeof = "Ali";

              let finally = "Ali";

      \*/

  // Data Types

  /\*

  1: Primitive data types

    // we not store any refrence

    String : let name = "ali";

    Number : let age = 22;

    Boolean : let isTeenage = true;

    Null : let address = null;

    Undefined : let age;

    Symbol : let symbol = Symbol("Greeting");

          let name = "Ali";

          let age = 25;

          let isMarried = true;

          let address = null;

          let greeting;

          let symbol = Symbol("Greeting");

  2: Non primitive data types

    Object : const person = {name: "ali", age: 22};

    Array : let marks = [1,2,3,4,5]

    const person = {

              name: "Ali",

              age: 25,

              address: {

                  street: "Street",

                  city: "City"

              }

          };

      \*/

  // Type Coercion (Type Casting)

  /\*

      // String to Number

          let name = "25";

          let age = Number(name);

          console.log(age);

          // Number to String

          let age = 25;

          let name = String(age);

          let name1 = age.toString();

          console.log(name);

          // Boolean to Number

          let isMarried = true;

          let isTeenage = Boolean(isMarried);

          console.log(isTeenage);

      \*/

  /\*

        how to take input from user

        1: prompt

        2: forms

    \*/

  // let num1 = prompt("Enter first number ");

  // num1 = Number(num1)

  // let num2 = prompt("Enter second number ");

  // num2 = Number(num2)

  // let sum = num1 + num2;

  // console.log("Sum: ",sum)

  /\*

    Program General Procedure

    \*/

  // varibles

  // input

  // processing

  // output

  //   take 4 numbers from user and tell us which number is greater and smaller

  // 20,10,5,25

  // small is 5

  // large is 25

  /\*

    inputs

        num1,num2,num3,num4

    processing

        large number

        small number

    output

        result how which number is small and greater

  \*/

  let num1 = prompt("Enter first number ");

  num1 = Number(num1);

  let num2 = prompt("Enter Second number ");

  num2 = Number(num2);

  let num3 = prompt("Enter Third number ");

  num3 = Number(num3);

  let num4 = prompt("Enter Fourth number ");

  num4 = Number(num4);

  if (num1 > num2 && num1 > num3 && num1 > num4) {

    console.log("This number is largest ", num1);

  } else if (num2 > num3 && num2 > num4) {

    console.log("This number is largest ", num2);

  } else if (num3 > num4) {

    console.log("This number is largest ", num3);

  } else {

    console.log("This number is largest ", num4);

  }

  if (num1 < num2 && num1 < num3 && num1 < num4) {

    console.log("This number is smallest ", num1);

  } else if (num2 < num3 && num2 < num4) {

    console.log("This number is smallest ", num2);

  } else if (num3 < num4) {

    console.log("This number is smallest ", num3);

  } else {

    console.log("This number is smallest ", num4);

  }

  /\*

    Selection Structure || Flow Control

        1: if

        2: if else

        3: if else if

        4: switch

        5: Conditional

    Operators

        1: Arithematic Operators

            + , - , / , \* , %

        2: Relational Operators

            > , < , >= , <= , == , === , !=

        3: Logical Operators

            && , || , !

        4: Assignment Operators

            =

        Syntax

            let varibleName;

            let variableName = value;

            console.log("Message",variable);

            alert("Message");

            prompt("Message")

            if(age >= 18){

                // Illegible for cnic

            }

            if(age < 18){

                // Not Illegible for cnic

            }

            if(age >= 18){

                // Illegible for cnic

            }else{

                // Not illegible for cnic

            }

            if(condition){

            }else if(condition){

            }else if(condition){

            }else{

            }

            if(numberOfDay == 1){

                today is monday

            }else if(numberOfDay == 2){

                today is tuesday

            }else if(numberOfDay === 3){

                ...

            } ... {

            }else{

                // invalid number

            }

  \*/

</script>

// if decision making on any condition

/\*

    condition always have two results true,false

    if condition are true then code will be execute otherwise skip.

    if(condition){

        if condition are true this code run

    }

    if(condition){

        if condition are false this code don't run

    }

\*/

// let age = prompt("Enter your age");

// age = Number(age);

// if (age >= 18) {

//   console.log("You are eligble for vote");

// }

// if (age < 18) {

//   console.log("You are not eligble for vote");

// }

// let number = prompt("Enter your number");

// number = Number(number);

// if(number%2 == 0){

//     console.log("The number is even")

// }

// if(number%2 == 1){

//     console.log("The number is odd")

// }

let year = prompt("Enter a year");

year = Number(year);

if(year % 4 === 0){

    console.log("This year is leap year and in febuaray have 29 days")

}

if(year % 4 !== 0){

    console.log("This year is not leap year and in febuaray have 28 days")

}

// if decision making on any condition

/\*

    condition always have two results true,false

    if condition are true then code will be execute otherwise skip.

    if(condition){

        if condition are true this code run

    }

    if(condition){

        if condition are false this code don't run

    }

\*/

// let age = prompt("Enter your age");

// age = Number(age);

// if (age >= 18) {

//   console.log("You are eligble for vote");

// }

// if (age < 18) {

//   console.log("You are not eligble for vote");

// }

// let number = prompt("Enter your number");

// number = Number(number);

// if(number%2 === 0){

//     console.log("The number is even")

// }

// if(number%2 === 1){

//     console.log("The number is odd")

// }

// let year = prompt("Enter a year");

// year = Number(year);

// if(year % 4 === 0){

//     console.log("This year is leap year and in febuaray have 29 days")

// }

// if(year % 4 !== 0){

//     console.log("This year is not leap year and in febuaray have 28 days")

// }

/\*

    ⁡⁣⁣⁢𝗟𝗼𝗴𝗶𝗰𝗮𝗹 𝗼𝗽𝗲𝗿𝗮𝘁𝗼𝗿𝘀: 𝗔𝗡𝗗 (&&), 𝗢𝗥 (||), 𝗡𝗢𝗧 (!)⁡

    AND operator (&&) returns true if both operands are true and false otherwise

    true && true === true

    true && false === false

    faslse && true === false

    false && false === false

    OR operator (||) returns true if at least one operand is true

    true || true === true

    true || false === true

    false || true === true

    false || false === false

    NOT operator (!) returns true if operand is false

    !true === false

    !false === true

    !(true || false) === false

    !(true && false) === true

    !(true && true) === false

    !(false && false) === true

    ​‌‌‌‍‍‍⁡⁣⁢⁣𝙞𝙛 𝙚𝙡𝙨𝙚⁡​

    if the condition is true then the code will be executed

    if(condition){

        if condition are true this code run

    }else{

        if condition are false this code run

    }

    ⁡⁡⁣⁢⁢We cannot do this

    if(condition){

        if condition are true this code run

    }else (condition){ // this is wrong

    }

        ⁡ ⁡

\*/

// let age = prompt("Enter your age");

// age = Number(age);

// if (age >= 18) {

//   console.log("You are eligble for vote");

// } else {

//   console.log("You are not eligble for vote");

// }

// let number = prompt("Enter your number");

// number = Number(number);

// if (number % 2 === 0) {

//   console.log("The number is even");

// } else {

//   console.log("The number is odd");

// }

// let year = prompt("Enter a year");

// year = Number(year);

// if (year % 4 === 0) {

//   console.log("This year is leap year and in febuaray have 29 days");

// } else {

//   console.log("This year is not leap year and in febuaray have 28 days");

// }

/\*

    ​‌‌‍⁡⁢⁣⁣if else if⁡​

    if the condition is matched then this code are executed remaining code are skipped

    if(condition1){

        if condition are true this code run

    }else if(condition2){

        if condition are true this code run

    }else if(condition3){

        if condition are true this code run

    }esle{

    }

\*/

// let marks = prompt("Enter Your Marks");

// marks = Number(marks);

// if (marks >= 90) {

//   console.log("Your grade is A+");

// } else if (marks >= 85 && marks < 90) {

//   console.log("Your grade is B");

// } else if (marks >= 80) {

//   console.log("Your grade is B");

// } else if (marks >= 70) {

//   console.log("Your grade is C");

// } else if (marks >= 60) {

//   console.log("Your grade is D");

// } else if (marks >= 50) {

//   console.log("Your grade is E");

// } else {

//   console.log("Your grade is F");

// }

let number = prompt("Enter the number");

number = Number(number);

// if (number >= 1) {

//   if (number <= 10) {

//     console.log("Your number is good");

//   } else {

//     console.log("Your number is not good becuse you enter large number 10");

//   }

// } else {

//   console.log("You enter small number from 1");

// }

if(number >=1 && number <=10){

    console.log("Your number is good");

}else{

    console.log("Entered Number is Wrong. Should between 1 to 10");

}

/\*

    ⁡⁢⁣⁢if else​⁡

    When you have confirm this any situation have two posible asnwer then you use if else

    if the condition is true then the code will be executed

    if(condition){

        if condition are true this code run

    }else{

        if condition are false this code run

    }

    ⁡⁡⁣⁢⁢We cannot do this

    if(condition){

        if condition are true this code run

    }else (condition){ // this is wrong

    }

    ⁡⁢⁣⁢Conditional Statements

    (condition) ? ⁡⁣⁢⁢if true run this⁡ : ⁡⁢⁣⁣if false then run this⁡ ⁡

\*/

// let number = parseInt(prompt("Enter any number: "));

// let result = number % 2 === 0 ? "Even" : "odd";

// console.log("The number is ", result);

let choice = parseInt(

  prompt(`

    Press 1: For Air

    Press 2: For Water

    Press 3: For Steel

    Enter the menu chocie number

    `)

);

let airSound = 1100;

let waterSound = 4900;

let steelSound = 16400;

if (choice >= 1 && choice <= 3) {

  let distance = parseInt(prompt("Enter the distance in feets: "));

  if (distance > 0) {

    if (choice === 1) {

      alert(`The total sound in this is ${distance / airSound}`);

    } else if (choice === 2) {

      alert(`The total sound in this is ${distance / waterSound}`);

    } else {

      alert(`The total sound in this is ${distance / steelSound}`);

    }

  } else {

    alert("Distance must be greate then 0");

  }

} else {

  alert("Please Enter Correct menu medium");

}

// let isBlast = confirm("Are you sure to blast your computer?");

// if(isBlast){

//     console.log("Blasting started!");

// }else{

//    console.log("Blasting cancelled!");

// }

/\*

    How to make conditions

    relational and logical operator

    Relational Operator

        compare two values (6 > 7)

        > < >= <= != === ==

    Logical Operator

        compare two relational equations (5>6) && (6<9)

        && || !

    Condition must have at least one relational operators

        we can do

            if(2 > 3)

            taking number from user and should be greater than 2 and less then 5

            if(number>2)

                if(number<5)

            if(number > 2 && number < 5)

        if(num) // it is wrong when it have number

        if("user type value") // it is wrong when it have string

        if(isBlast) // it is good when it have boolean(true ,false)

        if(number === 1) // it is true

        if(string === "hi") // it is correct

        if("hi") // it is wrong

    if (condition) {

        Code to run if condition is true

    } else {

        Code to run if condition is false

    }

\*/

<p>6 <sup>3</sup> = 6 \* 6 \* 6= 216</p>

<script>

  // how to find power in js

  // console.log(6 \*\* 3)

  // console.log(Math.pow(6,3))

  /\*

    input:

        radius

    processing:

        area=3.14 \* (radius \*\* 2)

    output:

        area

\*/

  let radius = prompt("Enter radius ");

  radius = Number(radius);

  let area = 3.14 \* (radius \*\* 2);

  console.log("Area of circle: ", area);

</script>