

## JAVA Script Activity

Given a number 'number', assuming it's ranging from 1 – 999, convert it into words using **If.. else condition** or simply **if conditions** or **switch statement**.

**Sample input:** let number = 789;

**Sample output:** Seven Hundred Eighty Nine

let inumber = "";

```
> let inumber = "";

function convertToWords(number) {
  if (number < 1 || number > 999) {
    return "Number out of range";
  }

  const ones = ["", "One", "Two", "Three", "Four", "Five", "Six", "Seven", "Eight", "Nine"];
  const teens = ["Ten", "Eleven", "Twelve", "Thirteen", "Fourteen", "Fifteen",
    "Sixteen", "Seventeen", "Eighteen", "Nineteen"];
  const tens = ["", "", "Twenty", "Thirty", "Forty", "Fifty", "Sixty", "Seventy", "Eighty", "Ninety"];

  let word = "";

  // Hundreds place
  if (number >= 100) {
    let hundreds = Math.floor(number / 100);
    word += ones[hundreds] + " Hundred";
    number %= 100;
    if (number > 0) {
      word += " ";
    }
  }

  // Tens and Ones place
  if (number >= 20) {
    let t = Math.floor(number / 10);
    word += tens[t];
    number %= 10;
    if (number > 0) {
      word += " " + ones[number];
    }
  } else if (number >= 10) {
    word += teens[number - 10];
  } else if (number > 0) {
    word += ones[number];
  }

  return word;
}

console.log(convertToWords(number));
< undefined
> convertToWords(232)
< 'Two Hundred Thirty Two'
> convertToWords(789)
< 'Seven Hundred Eighty Nine'
>
```

Using **While Loop**, print the pattern below. Given 'height' as height of the triangle and assuming it is not a negative number.

**Sample input:** let height = 5;

**Sample output:** \* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

```
> let height = 5;
let row = 0;

while (row < height) {
  let line = "";

  let spaceCount = row;
  while (spaceCount > 0) {
    line += " ";
    spaceCount--;
  }

  let starCount = height - row;
  while (starCount > 0) {
    line += "* ";
    starCount--;
  }

  console.log(line.trimEnd());
  row++;
}
```

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

< 4

```
> let height = 6;
let row = 0;

while (row < height) {
  let line = "";

  let spaceCount = row;
  while (spaceCount > 0) {
    line += " ";
    spaceCount--;
  }

  let starCount = height - row;
  while (starCount > 0) {
    line += "* ";
    starCount--;
  }

  console.log(line.trimEnd());
  row++;
}
```

\* \* \* \* \*

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

< 5

Using **For Loop**, print the pattern below. Given 'height' as height of the 'X' sign and assuming it is not a negative number and 'height' is an odd number.

**Sample input:** let height = 5;

**Sample output:**

```
*  *
*  *
*
*  *
*  *
```

```
> let height = 5; // Must be odd and > 0

for (let i = 0; i < height; i++) {
  let line = "";

  for (let j = 0; j < height; j++) {
    if (j === i || j === height - 1 - i) {
      line += "*";
    } else {
      line += " ";
    }
  }

  console.log(line);
}

*  *
*  *
*
*  *
*  *
< undefined

> let height = 7; // Must be odd and > 0

for (let i = 0; i < height; i++) {
  let line = "";

  for (let j = 0; j < height; j++) {
    if (j === i || j === height - 1 - i) {
      line += "*";
    } else {
      line += " ";
    }
  }

  console.log(line);
}

*  *
*  *
*  *
*
*  *
*  *
*  *
*  *
< undefined

>
```

Create a function that calculates the perimeter of a triangle. Function should return the value of perimeter.

```
> function trianglePerimeter(side1, side2, side3) {  
    return side1 + side2 + side3;  
}  
  
let p = trianglePerimeter(8, 2, 5);  
console.log("Perimeter: " + p);  
Perimeter: 15
```

We have the following arrays:

```
color = ["Blue ", "Green", "Red", "Orange", "Violet", "Indigo", "Yellow "];
```

```
o = ["th","st","nd","rd"];
```

Write a JavaScript program to display the colors in the following way:

- "1st choice is Blue."
- "2nd choice is Green."
- "3rd choice is Red."

```
> let color = ["Blue", "Green", "Red", "Orange", "Violet", "Indigo", "Yellow"];
let o = ["th", "st", "nd", "rd"];

for (let i = 0; i < color.length; i++) {
  let suffix = "th";

  let choiceNumber = i + 1;

  if (choiceNumber % 100 < 11 || choiceNumber % 100 > 13) {
    if (choiceNumber % 10 >= 1 && choiceNumber % 10 <= 3) {
      suffix = o[choiceNumber % 10];
    }
  }

  console.log(`${choiceNumber}${suffix} choice is ${color[i]}.`);
}
```

1st choice is Blue.

2nd choice is Green.

3rd choice is Red.

4th choice is Orange.

5th choice is Violet.

6th choice is Indigo.

7th choice is Yellow.

```
let record = [{
  "Name": "Gibo",
  "Age": 16,
  "SkillSet" : [{
    "Skill": "SAP UI5"
  }, {
    "Skill": "SAP HANA"
  }]
}, {
  "Name": "Patrick",
  "Age": 22,
  "SkillSet" : [{
    "Skill": "SAP UI5"
  }, {
    "Skill": "SAP HANA"
  }, {
    "Skill": "SAP ABAP"
  }]
}, {
  "Name": "MJ",
  "Age": 24,
  "SkillSet" : [{
    "Skill": "SAP HANA"
  }]
}];
```

Given the data in slide 5, output the data(Name and Age) of the person with the highest number of skillset.

Output:       Name: Patrick

              Age: 22

```
> let record = [
  {
    "Name": "Gibo",
    "Age": 16,
    "SkillSet": [
      { "Skill": "SAP UI5" },
      { "Skill": "SAP HANA" }
    ]
  },
  {
    "Name": "Patrick",
    "Age": 22,
    "SkillSet": [
      { "Skill": "SAP UI5" },
      { "Skill": "SAP HANA" },
      { "Skill": "SAP ABAP" }
    ]
  },
  {
    "Name": "MJ",
    "Age": 24,
    "SkillSet": [
      { "Skill": "SAP HANA" }
    ]
  }
];

let maxSkills = 0;
let personWithMaxSkills = null;

for (let person of record) {
  let skillsCount = person.SkillSet.length;
  if (skillsCount > maxSkills) {
    maxSkills = skillsCount;
    personWithMaxSkills = person;
  }
}

console.log(`Name: ${personWithMaxSkills.Name}`);
console.log(`Age: ${personWithMaxSkills.Age}`);
Name: Patrick
Age: 22
```