


## for loop



```
for(initialisation; condition; updation) {  
    //do something  
}
```

```
for (let i=1; i<=5; i++) {  
    console.log(i);  
}
```

Print all odd numbers (1 to 15)



<> index.html

JS app.js

JS app.js > ...

```
1  for(let i=1; i<=1; i=i+2) {  
2    console.log(i);  
3  }
```

Print all even numbers (2 to 10)

# Infinite Loops

```
for(let i=1; i>=0; i++) {  
  
}
```

```
for(let i=1; i<=5; i--) {  
  
}
```

```
for(let i=1; ; i++) {  
  
}
```

Print the **multiplication table** for 5

```
let n = prompt("write your number");  
n = parseInt(n);
```

```
for(let i=n; i<=n*10; i=i+n) {  
    console.log(i);  
}
```

```
// for(let i=4; i<=40; i=i+4) {  
//     console.log(i);  
// }
```

## Nested for loop

```
for (let i=1; i<=3; i++) {  
    for (let j=1; j<=3; j++) {  
        console.log(j);  
    }  
}
```



```
for(let i=1; i<=3; i++) {  
    console.log(`outer loop ${i}`)  
    for(let j=1; j<=3; j++) {  
        console.log(j);  
    }  
}
```

## while loop

```
while (condition) {  
    //do something  
}
```

```
let i = 1;  
while (i <= 5) {  
    console.log(i);  
    i++;  
}
```

```
let i=5;
```

```
while(i>=1) {  
    console.log(i);  
    i++;  
}
```

# Favorite Movie ✓

let favMovie = "Avatar".

## Favorite Movie ✓

```
let favMovie = "Avatar";  
let guess = prompt(" ");  
while (guess != favMovie)
```

2 conditions  
1) right guess  $\Rightarrow$  guess = favMovie  
2) guess = "quit"

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# **break** keyword

---



loop execution stop

```
const favMovie = "avatar";

let guess = prompt("guess my favorite movie");

while(guess !== favMovie) {
  if(guess === "quit") {
    console.log("you quit");
    break;
  }
  guess = prompt("wrong guess. please try again");
}

if(guess === favMovie) {
  console.log("congrats!!");
}
```

## Loops with Arrays

```
let fruits = ["mango", "apple", "banana", "litchi", "orange"];

for(let i=0; i<fruits.length; i++) {
  console.log(i, fruits[i]);
}
```



```
for(let i=fruits.length-1; i>=0; i--) {  
  console.log(i, fruits[i]);  
}
```

# Loops with Arrays

## Nested Loops with Nested Arrays

```
let heroes = [ ["ironman", "spiderman", "thor"], ["superman", "wonder woman", "flash"]];

for(let i=0; i<heroes.length; i++) {
  console.log(`List #${i}`);
  for(let j=0; j<heroes[i].length; j++) {
    console.log(heroes[i][j]);
  }
}
```

## for of loop

```
for (element of collection) {  
    //do something  
}
```

```
let fruits = ["mango", "apple", "banana", "litchi", "orange"];  
  
for(fruit of fruits) {  
    console.log(fruit);  
}
```

```
for(char of "apnacollege") {  
    console.log(char);  
}
```

## Nested for of loop

```
let heroes = [ ["ironman", "spiderman", "thor"], ["superman", "wonder woman", "flash"]];  
for (list of heroes) {  
  for(hero of list) {  
    console.log(hero);  
  }  
}
```

# Todo App

- **list** - to show all todos
- **add** - to add a todo
- **delete** - to delete a task
- **quit** - to exit the todo



```
let todo = [];  
  
let req = prompt("please enter your request");  
  
while(true) {  
    if(req == "quit") {  
        console.log("quitting app");  
        break;  
    }  
  
    if(req == "list") {  
        console.log("-----");  
        for(let i=0; i<todo.length; i++) {  
            console.log(i, todo[i]);  
        }  
        console.log("-----");  
    } else if(req == "add") {  
        let task = prompt("please enter the task you want to add");  
        todo.push(task);  
        console.log("task added");  
    }  
}
```

```
    console.log("task added");  
  } else if(req == "delete") {  
    let idx = prompt("please enter the task index");  
    todo.splice(idx, 1);  
    console.log("task deleted");  
  } else {  
    console.log("wrong request");  
  }  
  
  req = prompt("please enter your request");  
}
```