NODE JS EVENTS

Node.js is built on an event-driven architecture that allows you to build highly scalable applications.
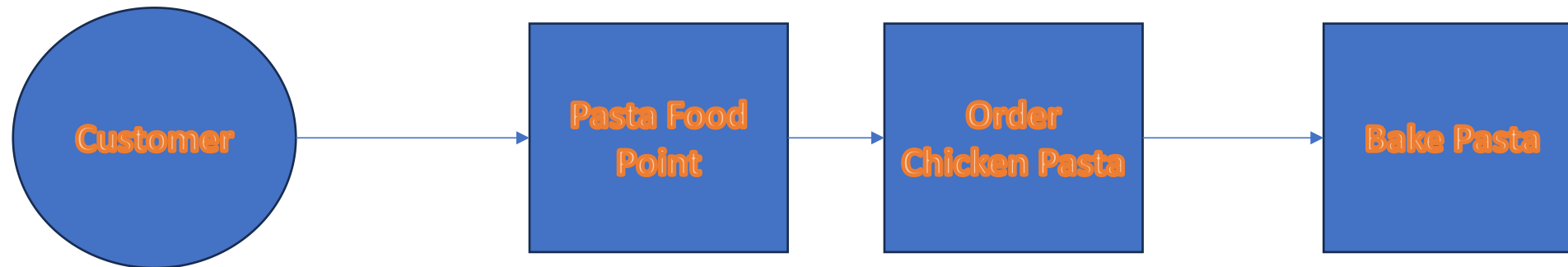
What is Event?
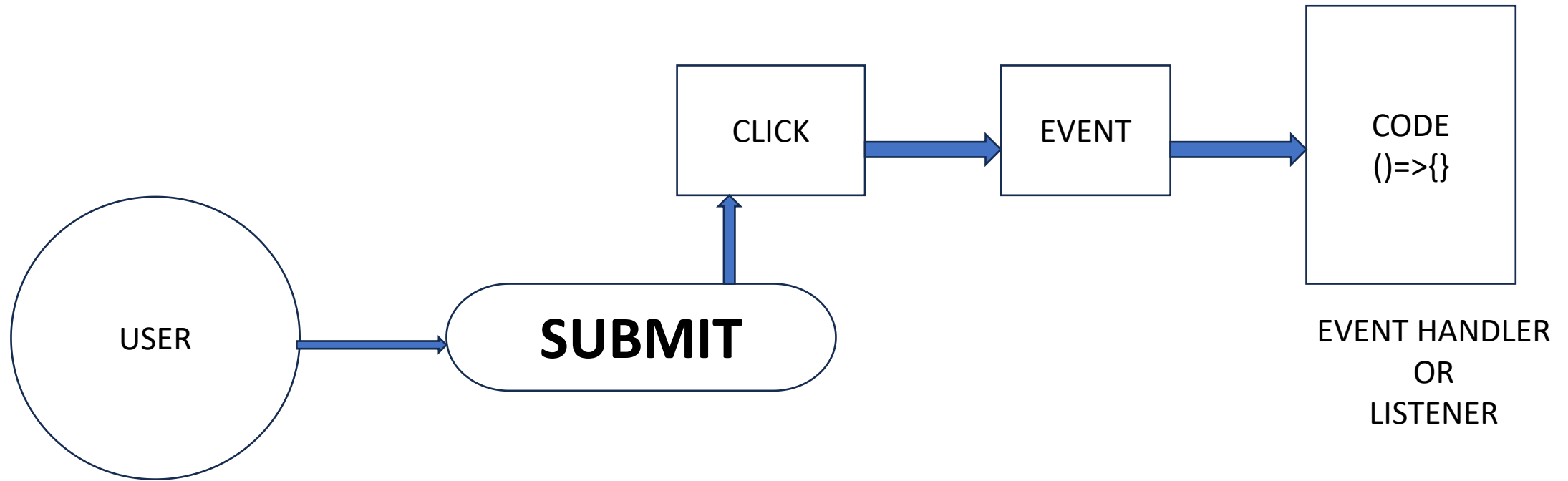
In **Node.js**, an event is an action or occurrence that the program can detect and handle. The event-driven architecture allows asynchronous programming, and your application becomes able to perform non-blocking operations.

Event Modules:

The events module allows us to work with events in Node JS

Real Life Example:

USER → SUBMIT → CLICK → EVENT → CODE ()=>{}

EVENT HANDLER OR LISTENER

Function callback(){
Document.getElementById("demo").innerHTML = "Hello World";
}
Document.getElementById("btn").addEventListener("Click", callback);

Events Example:
On Click
On Double Click
On Mouse Over
On Mouse Out
On Submit

Create a Node.Js application "EventDemo"
Example 1:index.js
1st way:

```
//importing event
var events= require('events')
//initializing event emitter instance
var eventEmitter = new events.EventEmitter();

var myEventHandler= ()=>{
console.log("Order Received! Baking a pizza...");
}
//registering event
eventEmitter.on('order-pizza', myEventHandler);
//triggering event
eventEmitter.emit('order-pizza');
//removing listener
eventEmitter.removeListener('order-pizza',myEventHandler);
console.log(" Listener Removed");
//reoving All listener registered to eventEmitter
eventEmitter.removeAllListeners('order-pizza',myEventHandler);
console.log("ALl listener removed");
```

- 2nd Way:(the concept of event emitter object using function)

```
//importing event
var events= require('events')

//initializing event emitter instance
var eventEmitter = new events.EventEmitter();

//registering event
eventEmitter.on('order-pizza', ()=>
{
    console.log("Order Received! Baking a pizza...");
});

//triggering event
eventEmitter.emit('order-pizza');
```

Example2: index2.js

```javascript
//importing event
var events= require('events');

//initializing event emitter instance
var eventEmitter = new events.EventEmitter();

//registering event
eventEmitter.on('order-pizza', (size,topping)=>
{
    console.log(`Order Received! Baking a ${size} pizza  with ${topping}...`);
});

//triggering event
eventEmitter.emit('order-pizza','large','Black Olives');
```

Example 3(Single Event with multiple event hundlers)   index4.js

```javascript
//importing event
var events= require('events');
//initializing event
var eventEmitter = new events.EventEmitter();
//registering event
eventEmitter.on('order-pizza', (size,topping)=>
{
    console.log(`Order Received! Baking a ${size} pizza  with ${topping}...`);
});
//registering event
eventEmitter.on('order-pizza',(size)=>{
    if(size=='large')
    {
        console.log("Serving Complimentary Sprite bottle!");
    }
});
//triggering event
eventEmitter.emit('order-pizza','large','Black Olives');
```