

AR MARKER EVENTS



What is our GOAL for this MODULE?

We learned about marker events in augmented reality and also to structure the database required for the AR menu card.

What did we ACHIEVE in the class TODAY?

- Learned to handle marker events in augmented reality web apps.
- Learned to structure the database for the menu card.

Which CONCEPTS/CODING BLOCKS did we cover today?

- AR.js marker creating tool.
- SweetAlert swal() function.
- <a-marker>, <a-entity> , <a-assets> tags.
- ngrok to run the application.

How did we DO the activities?

1. Write a component to handle markerFound and markerLost events in the AR scene.

```
<!--JS Files-->
<script src="./js/markerHandler.js"></script>
<script src="./js/addButtons.js"></script>
```

```
<!--Pattern Marker-->
<a-marker id="pizza-marker" type="pattern" url="assets/dish-markers/pattern-pizza.patt" cursor="rayOrigin: mouse"
markerhandler>
```

2. Update the button-div property of the button.

```
button {
  width:120px;
}

#button-div {
  display: none;
  align-items: center;
  justify-content: space-around;
  position: fixed;
  bottom: 10px;
  width:100%;
  z-index: 1;
  border: 2px solid black;
}
```

3. Write two functions to handle the marker events.

```
AFRAME.registerComponent("markerhandler", {
  init: async function () {

    this.el.addEventListener("markerFound", () => {
      this.handleMarkerFound();
    });

    this.el.addEventListener("markerLost", () => {
      this.handleMarkerLost();
    });
  },
  handleMarkerFound: function () {
    // Changing button div visibility
    var buttonDiv = document.getElementById("button-div");
    buttonDiv.style.display = "flex";
  },
  handleMarkerLost: function () {
    // Changing button div visibility
    var buttonDiv = document.getElementById("button-div");
    buttonDiv.style.display = "none";
  }
});
```

4. Add the library to add alert messages whenever the buttons are clicked.

```
<!-- SweetAlert -->
<script src="https://unpkg.com/sweetalert/dist/sweetalert.min.js"></script>
```

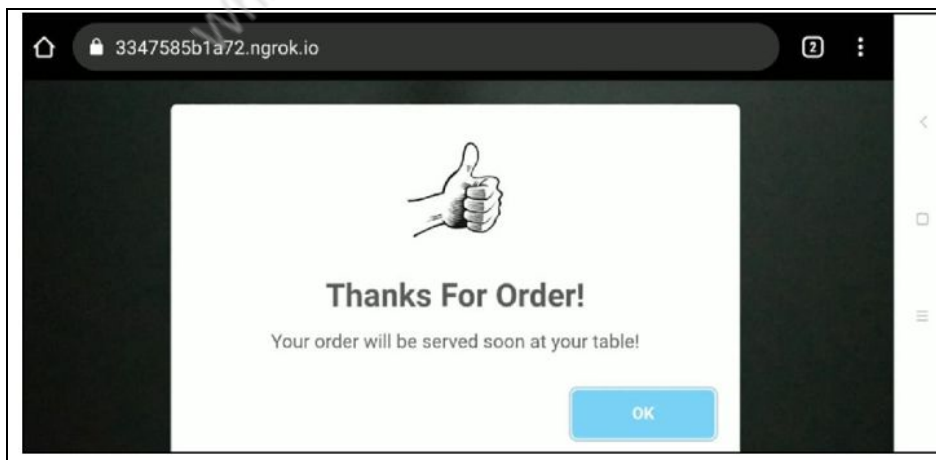
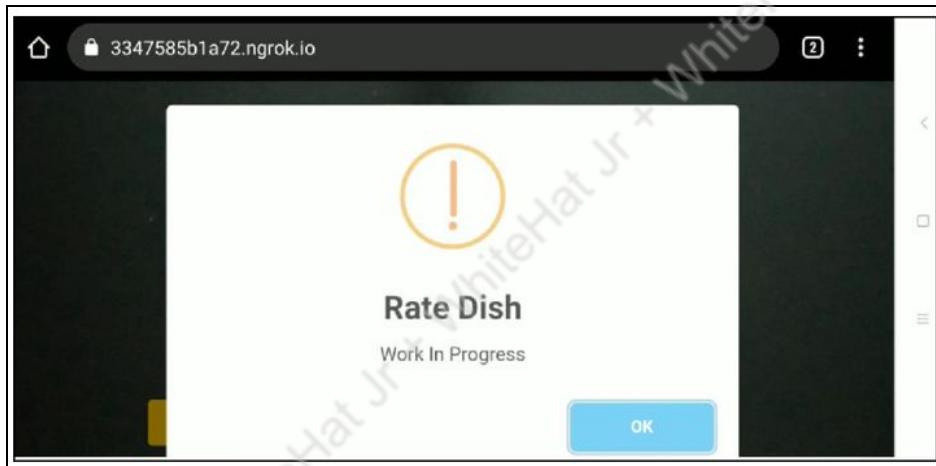
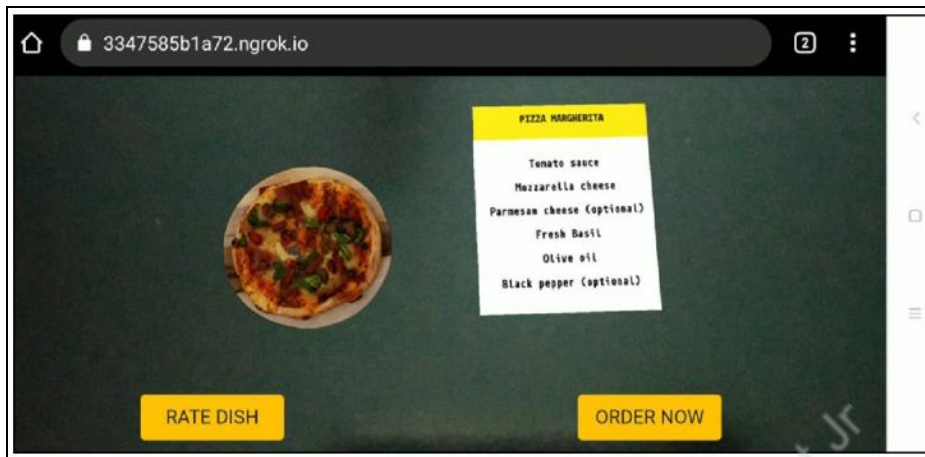
5. Add the styling to the alert messages in .css file.

```
.swal-icon img{
  width: 80px;
  height: 80px;
}
```

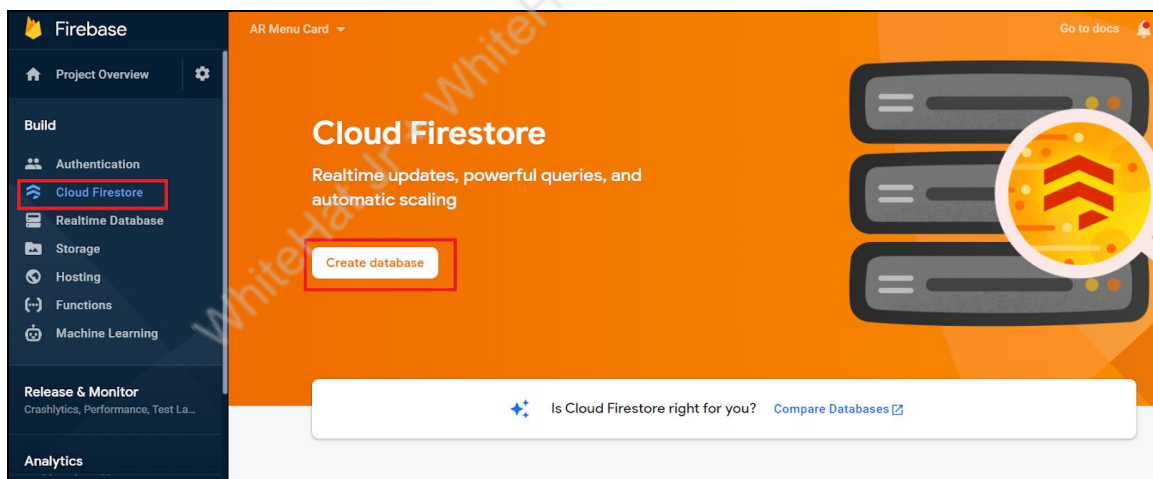
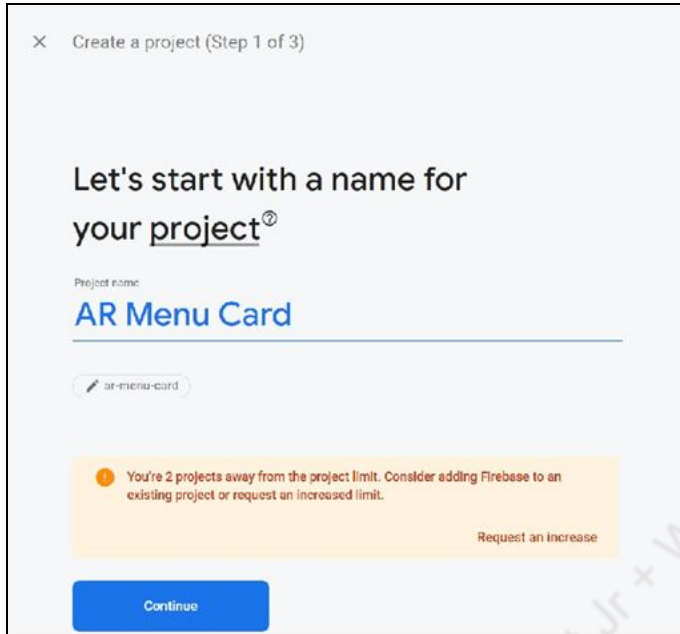
6. Add the alert messages in the **handleMarkerFound()** function on the button click:
- Use **swal()** function.
 - Add **icon**, **title**, **text** as the options in the **swal()**.

```
handleMarkerFound: function () {  
  // Changing button div visibility  
  var buttonDiv = document.getElementById("button-div");  
  buttonDiv.style.display = "flex";  
  
  var ratingButton = document.getElementById("rating-button");  
  var orderButtton = document.getElementById("order-button");  
  
  // Handling Click Events  
  ratingButton.addEventListener("click", function () {  
    swal({  
      icon: "warning",  
      title: "Rate Dish",  
      text: "Work In Progress"  
    });  
  });  
  
  orderButtton.addEventListener("click", () => {  
    swal({  
      icon: "https://i.imgur.com/4NZ6uLY.jpg",  
      title: "Thanks For Order!",  
      text: "Your order will be served soon at your table!"  
    });  
  });  
},
```

7. Run and test the application using the https ngrok URL.

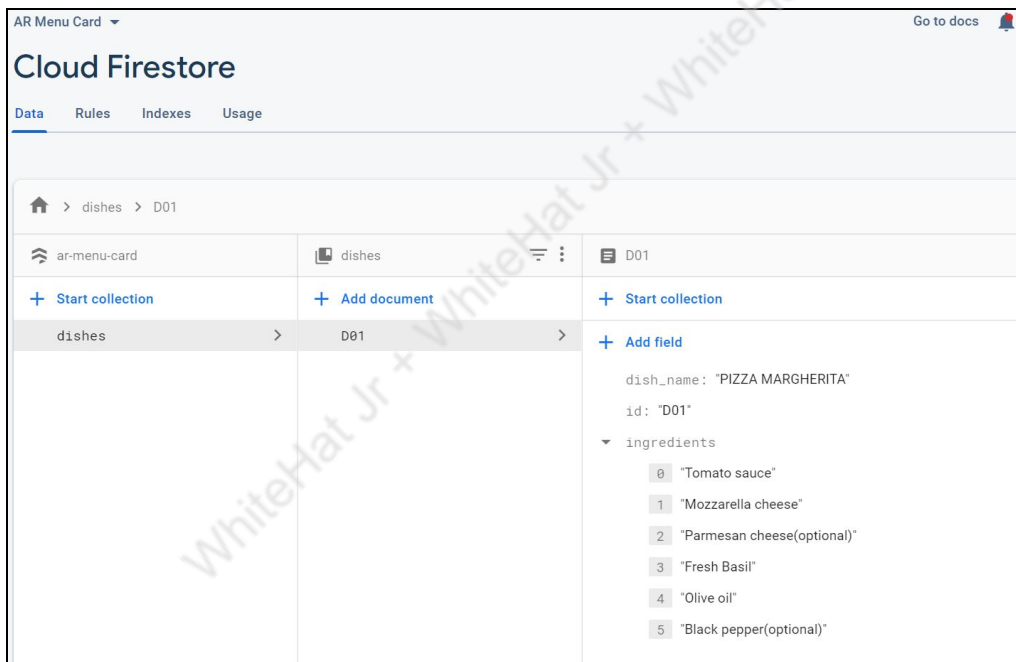
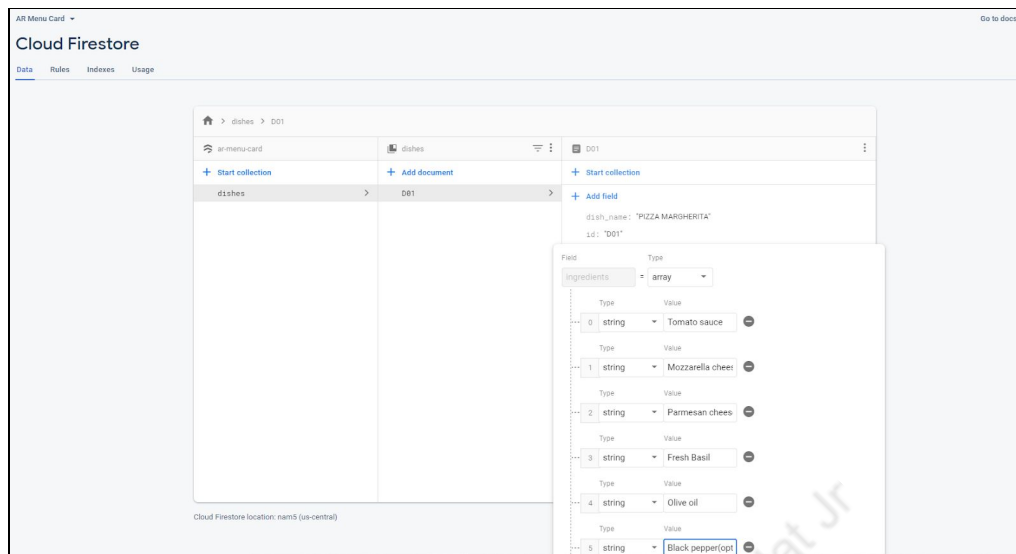


8. Open the Firebase console and create a Firebase project to create the cloud firestore database.



9. Add data fields as below.

- **Add collection:** dishes
- **Add document:** D01
- **Add fields:**
 - dish_name: string
 - ingredients: array
 - marker_pattern_url: string
 - marker_image_url: string
 - model_geometry: map
 - position: map
 - x: number
 - y: number
 - z: number
 - rotation: map
 - x: number
 - y: number
 - z: number
 - scale: map
 - x: number
 - y: number
 - z: number
 - model_url: string



We will keep on adding more data when we add more functionality to the scene.

What's NEXT?

In the next class, we will learn about how we can connect A-Frame to the Firebase database in Augmented Reality Web Apps.

EXTEND YOUR KNOWLEDGE:

- You can refer to the link below to explore more about A-Frame:
[A-Frame](#)
- You can refer to the link below to explore more about AR.js:
[AR.js](#)
- You can refer to the link below to explore more about SweetAlert:
[SweetAlert](#)

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