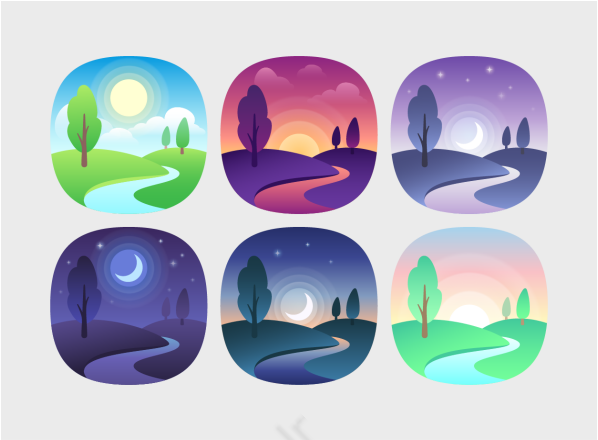
# PRO-C160

WhiteHat Jr
Live Online Coding for Kids

## DIFFERENT SIDE VIEWS



### What is our GOAL for this MODULE?

We learned about giving the user an experience of viewing a place from multiple sides of a place on the A-Frame cursor click event.

### What did we ACHIEVE in the class TODAY?

- Added thumbnail icons for a different side view of the place.
- Change the view with the click of icons.

### Which CONCEPTS/CODING BLOCKS did we cover today?

- Schema, state variable , init() method
- document.querySelector()
- .addEventListener(), setAttribute(),getAttribute(), .registerComponent() methods

## How did we DO the activities?

1. Create a file called SideView.js and add it to the index.html file.

```
<script src="js/CursorEvents.js"></script>
<script src="js/Tour.js"></script>
<script src="js/SideView.js"></script>
```

2. Create an A-Frame component ‘place-side-view’ in the file.

```
AFRAME.registerComponent("place-side-view", {

});
```

3. Create an entity with id as side-view-container and also add the place-side-view component to it.

```
<!-- Different Side View of the Places -->
<a-entity
  id="side-view-container"
  place-side-view
  cursor-listener
></a-entity>
```

4. Write a function called **createPlaceThumbNail()** to create the icons.

```
createPlaceThumbNail: function(position, id) {
  const entityEl = document.createElement("a-entity");
  entityEl.setAttribute("visible", true);
  entityEl.setAttribute("id", `place-${id}`);

  entityEl.setAttribute("geometry", {
    primitive: "circle",
    radius: 2.5
  });

  entityEl.setAttribute("material", {
    src: "./assets/helicopter.png",
    opacity: 0.9
  });
  entityEl.setAttribute("position", position);
  entityEl.setAttribute("cursor-listener", {});

  return entityEl;
}
```

5. Create a function **createPlaces()** to provide the place icons different positions and **createPlaceThumbNail()** to set the icons images at those positions**.**

```
createPlaces: function() {
  const sideViewContainer = document.querySelector(
    "#side-view-container"
  );

  let prevoiusXPosition = -150;
  let prevoiusYPosition = 30;

  for (var i = 1; i <= 4; i++) {
    const position = {
      x: (prevoiusXPosition += 50),
      y: (prevoiusYPosition += 2),
      z: -40
    };
    const entityEl = this.createPlaceThumbNail(position, i);
    sideViewContainer.appendChild(entityEl);
  }
```

6. Add condition in the .tick() function to check the state and set the entity's visible attribute.

```
tick: function() {
  const placesContainer = document.querySelector("#places-container");

  const { state } = placesContainer.getAttribute("tour");

  if (state === "view" || state === "change-view") {

    this.el.setAttribute("visible", true);
  } else {
    this.el.setAttribute("visible", false);
  }
},
```

7. Call the createPlaces() function in the .init() function.

```
init: function() {
  this.createPlaces();
},
```

8. Create a function **handleViewState()** to check for the id of the clicked icon and show the particular image.

```
handleViewState: function() {
  const el = this.el;

  const id = el.getAttribute("id");

  const placesContainer = document.querySelector("#places-container");

  const { selectedItemId } = placesContainer.getAttribute("cursor-listener");

  const sideViewPlacesId = ["place-1", "place-2", "place-3", "place-4"];

  if (sideViewPlacesId.includes(id)) {

    placesContainer.setAttribute("tour", {
      state: "change-view"
    });
    const skyEl = document.querySelector("#main-container");
    skyEl.setAttribute("material", {
      src: `./assets/360_images/${selectedItemId}/${id}.jpg`,
      color: "#fff"
    });
  }
},
```

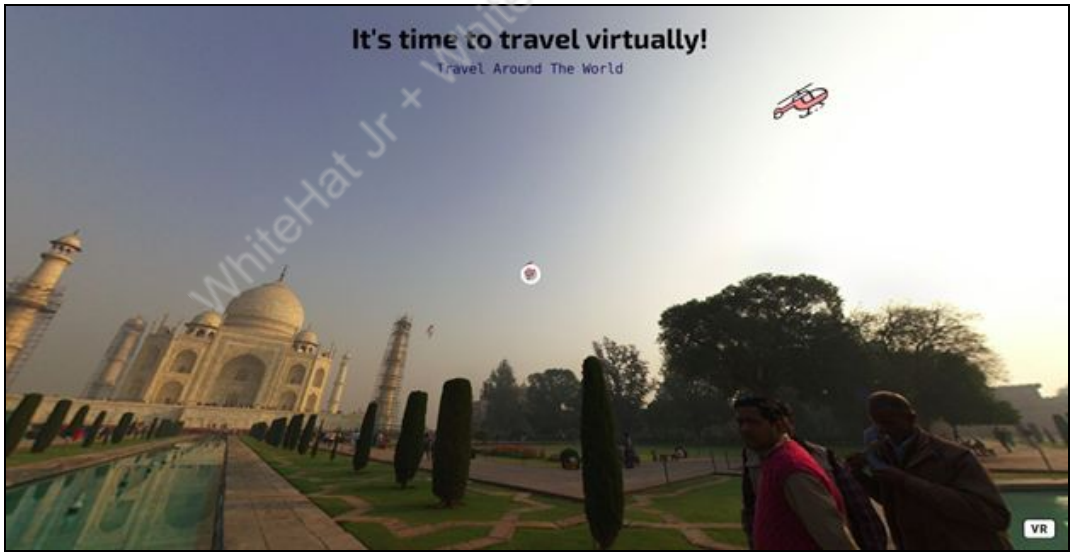
9. Create function **handleClickEvents()** to call the function **handleViewState()** to change the state on the cursor click event.

```
handleClickEvents: function() {
  //  Click Events
  this.el.addEventListener("click", evt => {
    const placesContainer = document.querySelector("#places-container");

    const { state } = placesContainer.getAttribute("tour");

    if (state === "places-list") {

      const id = this.el.getAttribute("id");

      const placesId = [
        "taj-mahal",
        "budapest",
        "new-york-city",
        "eiffel-tower"
      ];

      if (placesId.includes(id)) {
        placesContainer.setAttribute("tour", {
          state: "view",
          selectedCard: id
        });
      }
    }

    if (state === "view") {
      this.handleViewState();
    }
    if (state === "change-view") {
      this.handleViewState();
    }
  });
},
```

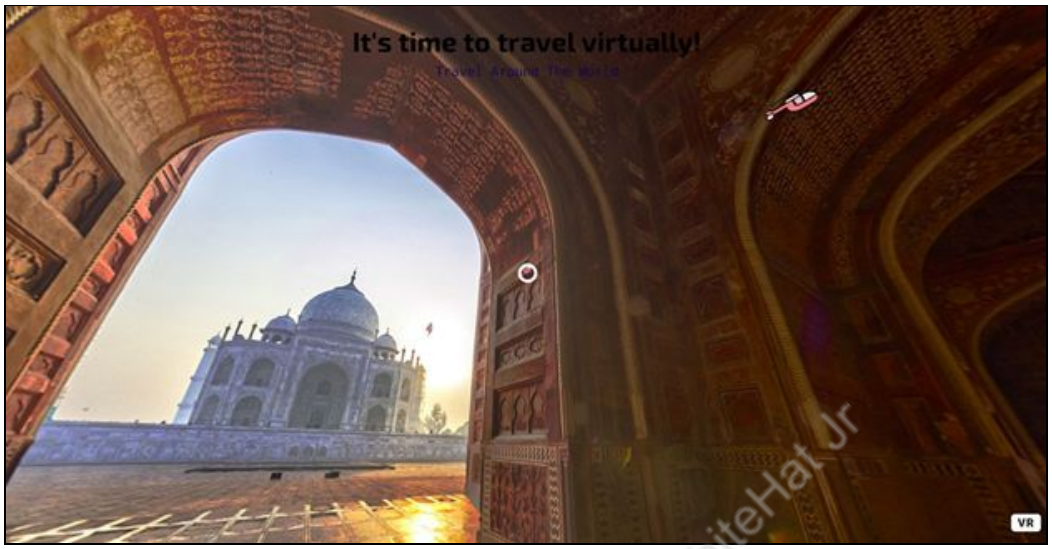
10. Run the code to see the output.

- Hover over the thumbnail and click once selected.


- 360 image after the click. Hover over the helicopter image icon to a different side view.



- Different side after clicking on the helicopter image icon.




We have successfully learned to create a virtual tour using the cursor events in A-Frame.

## What's NEXT?

In the next class, we will be learning to use Three.js objects and functions in A-Frame.

## EXTEND YOUR KNOWLEDGE:

1. Explore more about the A-Frame cursor.