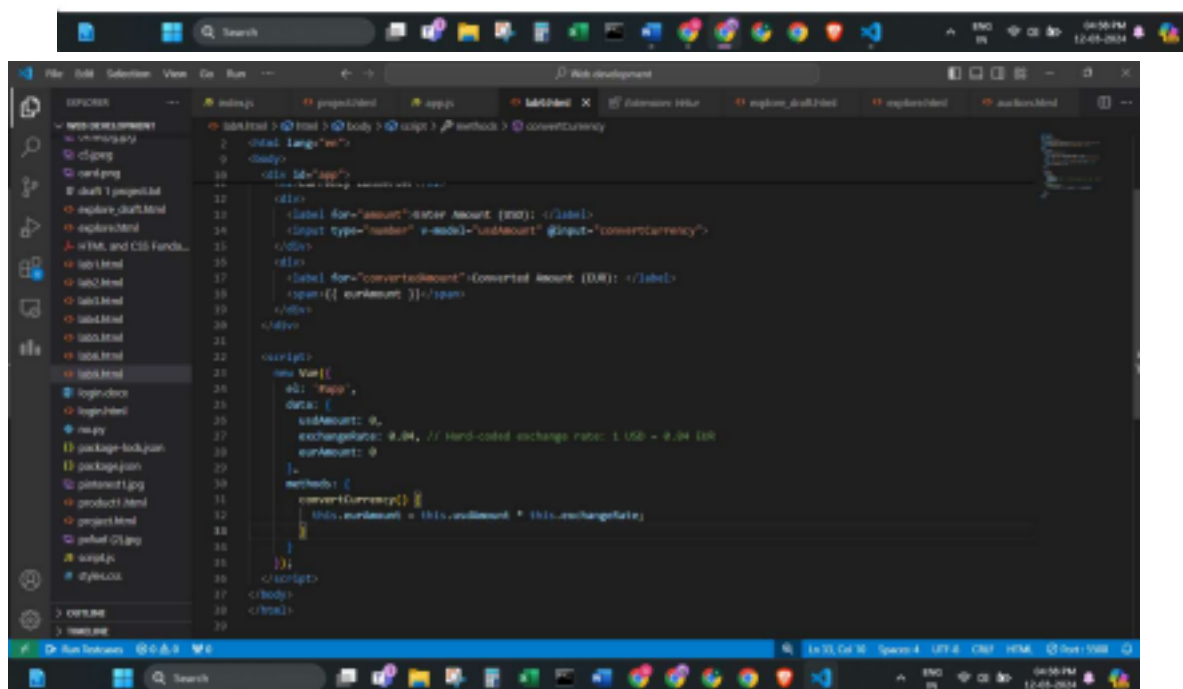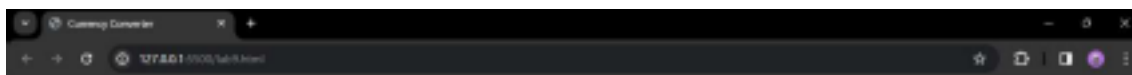Name : YASH PATEL

Branch : CSE

Roll No. : 22CS3068

Subject : Web Technology

Lab 9

T1. Develop a currency converter application that allows users to input an amount in one currency and convert it to another. For the sake of this challenge, you can use a hard-coded exchange rate. Take advantage of React state and event handlers to manage the input and conversion calculations.

T2. Create a stopwatch application through which users can start, pause and reset the timer. Use React state, event handlers and the setTimeout or setInterval functions to

manage the timer's state and actions.

T3. Develop a messaging application that allows users to send and receive messages in real time. The application should display a list of conversations and allow the user to select a specific conversation to view its messages. The messages should be displayed in a chat interface with the most recent message at the top. Users should be able to send new messages and receive push notifications.

```
<template>
<script>
export default {
  methods: {
    ...
    selectConversation(index) {
      this.selectedConversationIndex = index;
    },
    sendMessage() {
      const messageRef = firebase.database().ref(`/conversations/${this.selectedConversation.key}/messages`);
      messageRef.push({
        sender: this.user,
        text: this.newMessage
      });
      this.newMessage = '';
    }
  },
  created() {
    firebase.initializeApp(firebaseConfig);
    firebase.auth().onAuthStateChanged(user => {
      this.user = user;
      if (user) {
        const conversationsRef = firebase.database().ref('/conversations');
        conversationsRef.on('value', snapshot => {
          this.conversations = snapshot.val();
        });
      }
    });
  }
};
</script>
```