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<u>Scenario</u> : You are developing a Node.js web application that requires user authentication and management. You want to implement the following features:

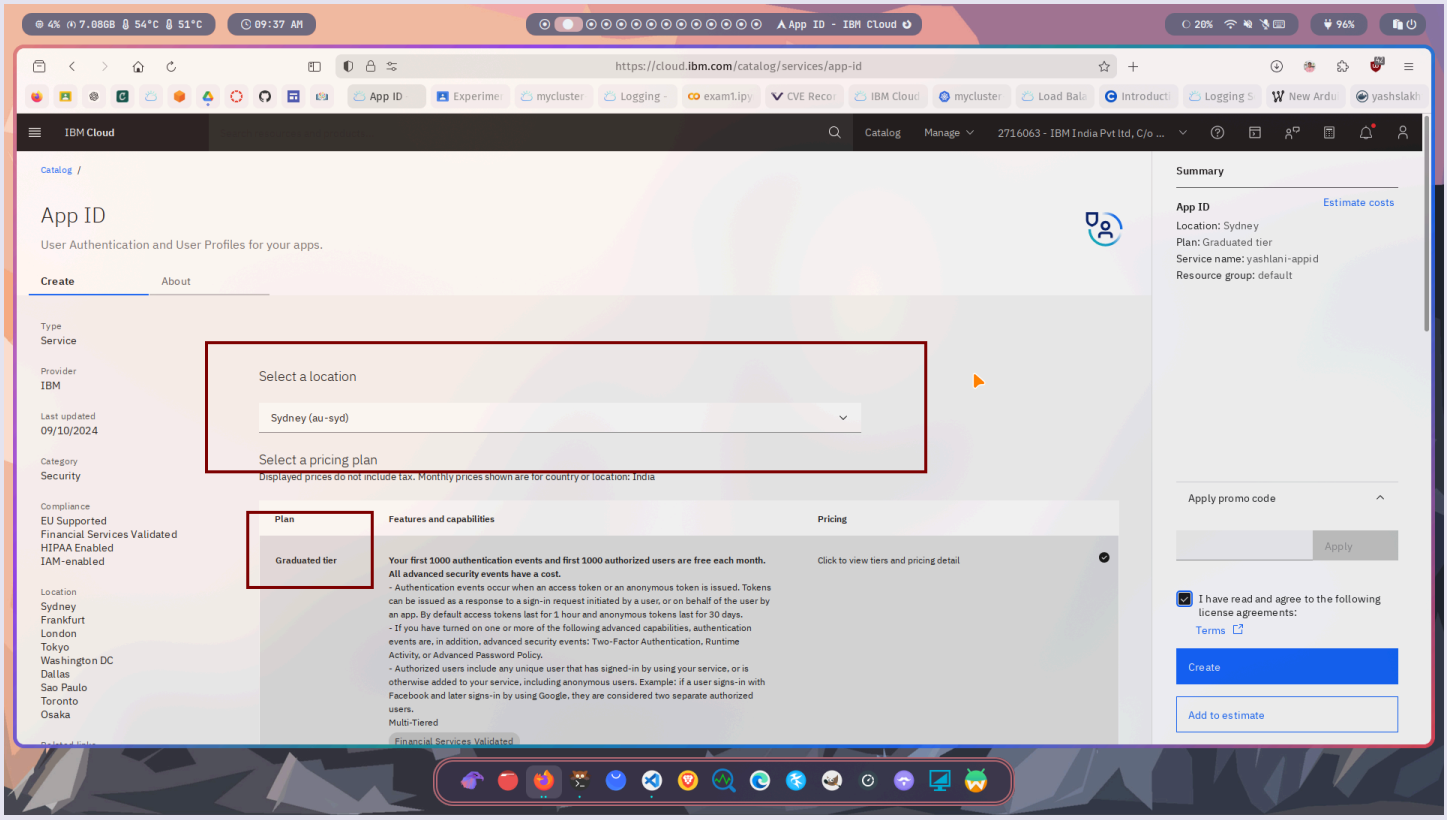
1. **Password Policies** : Enforce strong password requirements and password policies for users signing up

2. **Custom Email Templates** : Send customized email notifications for actions such as signup, password reset, and email verification.

3. **User Signup** : Allow users to sign up via the Cloud Directory in App ID and manage their authentication.

Steps and screenshots :

1. Create AppID instance with graduate tier



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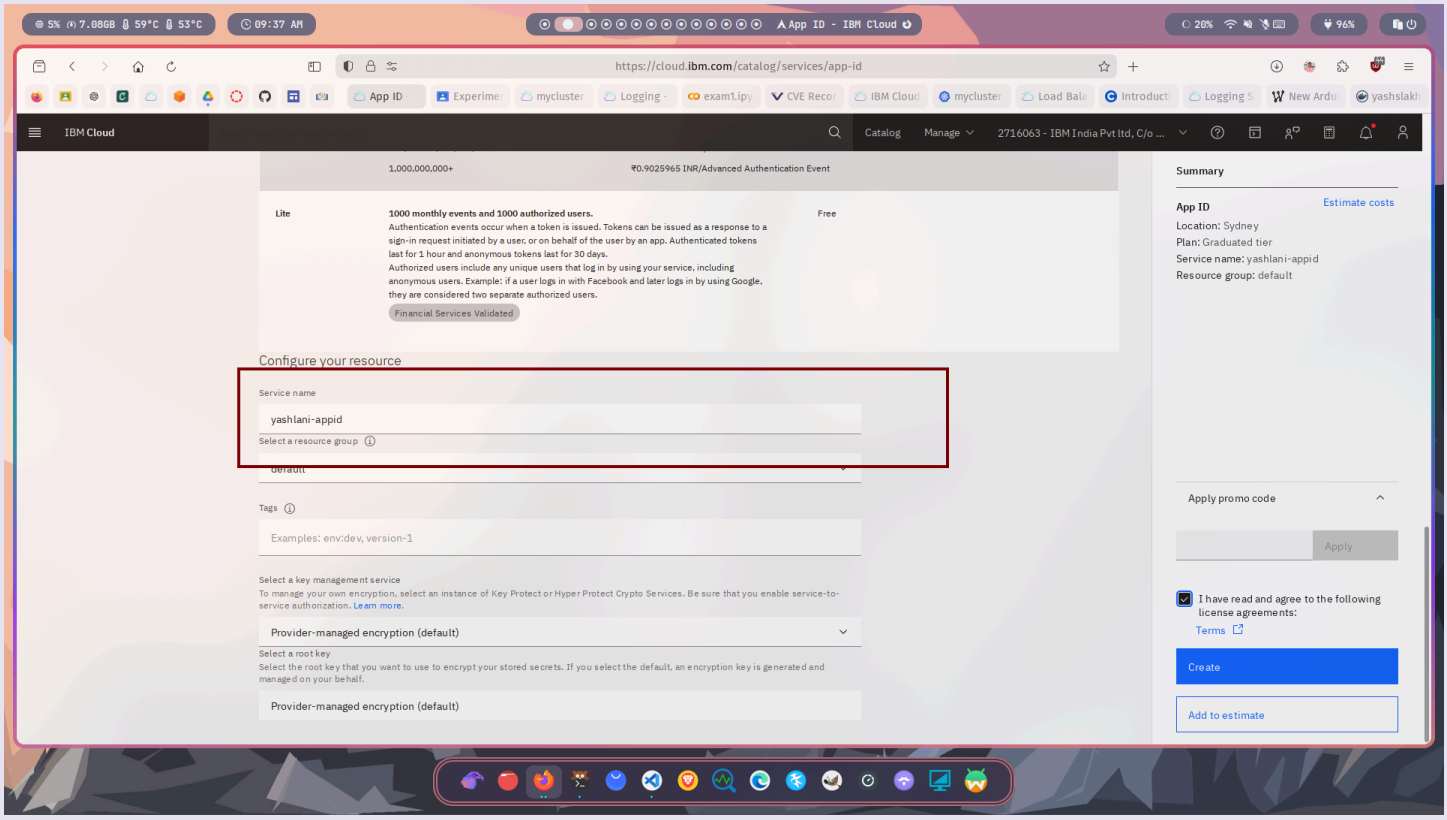

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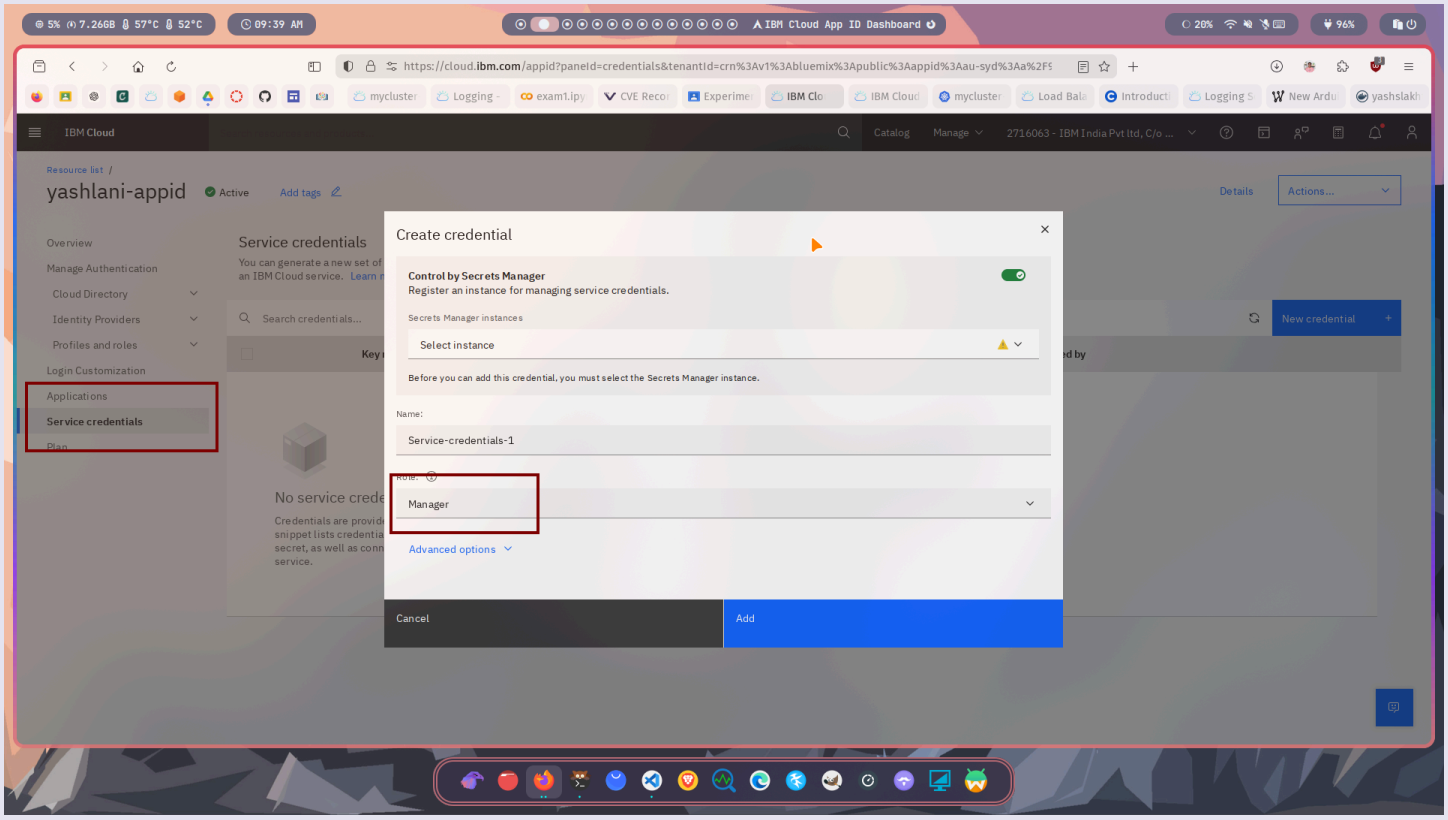
2. Create service credentials with manager role



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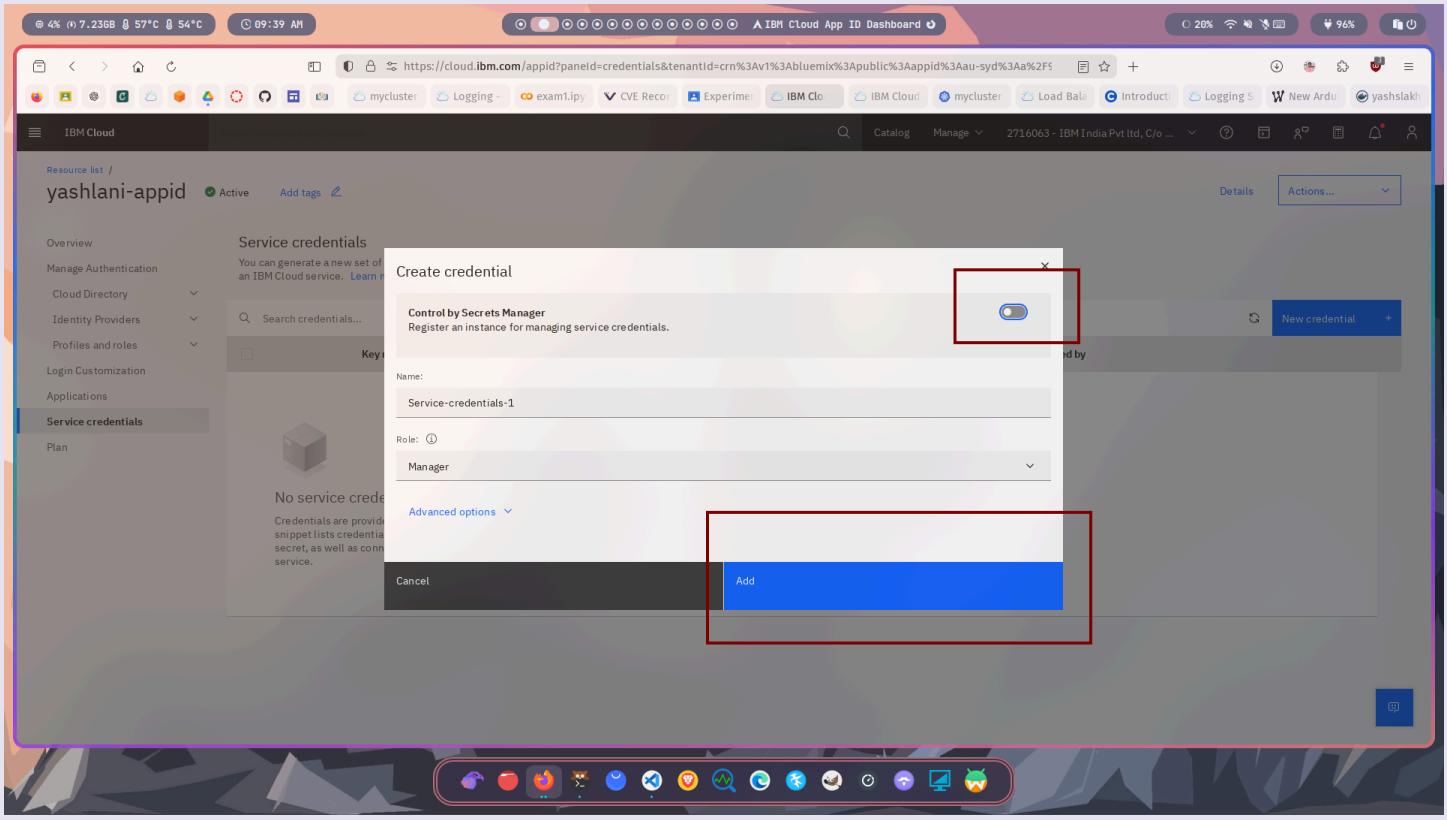

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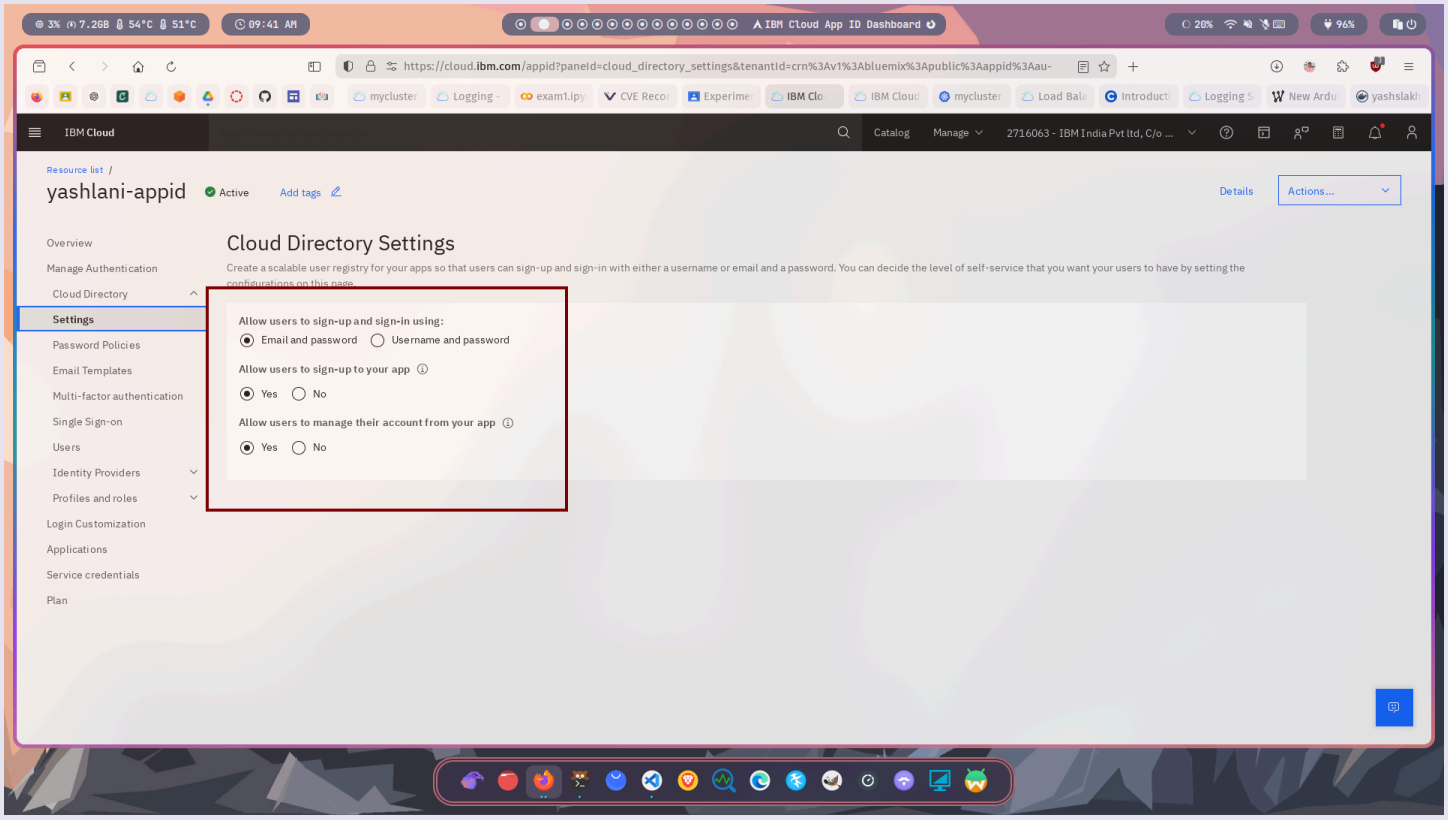
3. Ensure the below settings match



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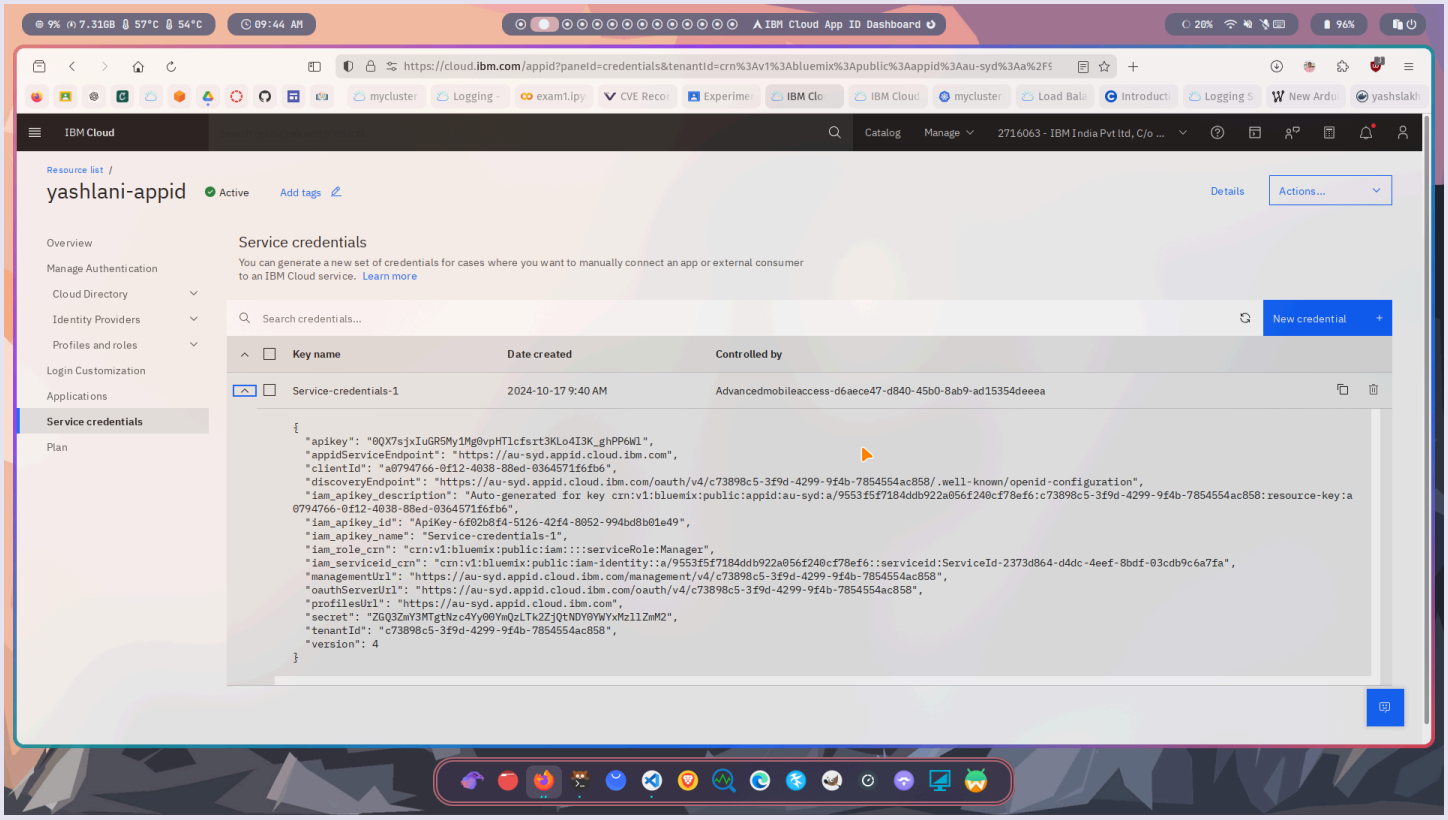
4. Copy and paste the credentials to node application



Code :

```
const express = require('express');
const session = require('express-session');
const passport = require('passport');
const WebAppStrategy = require('ibmcloud-appid').WebAppStrategy;
const app = express();
var port = 3000;
app.use(session({
   secret: '123456',
   resave: true,
```

```
   saveUninitialized: true
}));
app.use(passport.initialize());
app.use(passport.session());



passport.serializeUser((user, cb) => cb(null, user));
passport.deserializeUser((user, cb) => cb(null, user));

passport.use(new WebAppStrategy({
   tenantId: "c73898c5-3f9d-4299-9f4b-7854554ac85",
   clientId: "a0794766-0f12-4038-88ed-0364571f6fb6",
   secret: "ZGQ3ZmY3MTgtNzc4Yy00YmQzLTk2ZjQtNDY0YWYxMzllZmM2",
   oauthServerUrl:
"https://au-syd.appid.cloud.ibm.com/oauth/v4/c73898c5-3f9d-4299-
9f4b-7854554ac858",
   redirectUri: "http://localhost:3000/appid/callback"
}));



app.get('/appid/login',
passport.authenticate(WebAppStrategy.STRATEGY_NAME, {
   successRedirect: '/',
   forceLogin: true
```

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```
}));

//
// Handle callback
app.get('/appid/callback',
passport.authenticate(WebAppStrategy.STRATEGY_NAME, {
keepSessionInfo: true }));
//app.use(passport.authenticate(WebAppStrategy.STRATEGY_NAME));
app.use('/api', (req, res, next) => {
   if (req.user){
       next();
   } else {
       res.status(401).send("Unauthorized");
   }
});

app.get('/api/user', (req, res) => {
   //console.log(res);
console.log(req.session[WebAppStrategy.AUTH_CONTEXT]);
   res.json({
       user: {
           name: req.user.name
       }
   });
```

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```
});



app.get("/appid/logout", function(req, res) {
   req.logout(function(err) {
     if (err) { console.log(err); }
     res.redirect("/");
   });
 });





// Serve static resources

app.use(express.static('./public'));
app.listen(port);
```

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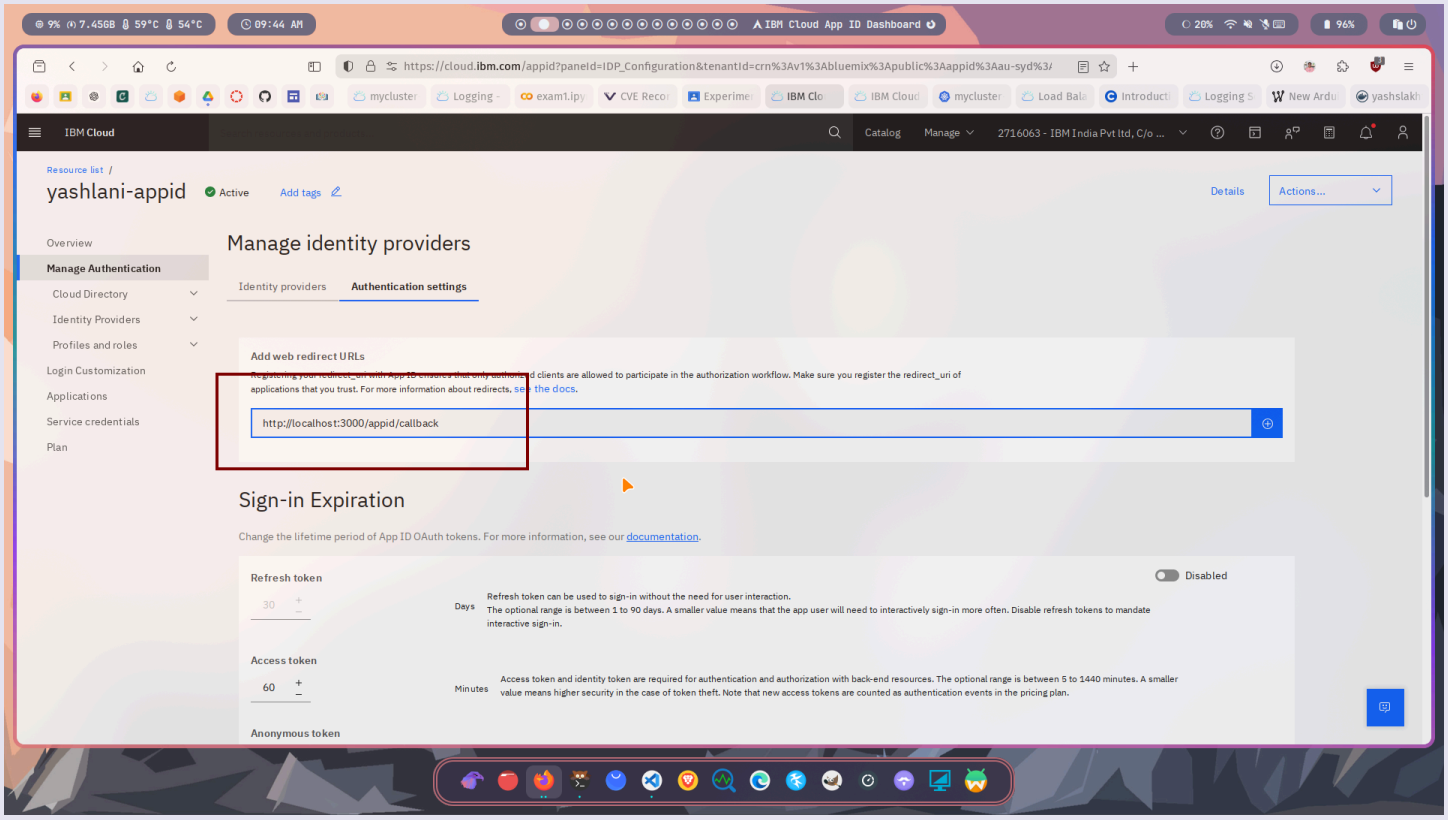
5. Add localhost redirect URI for local app to work



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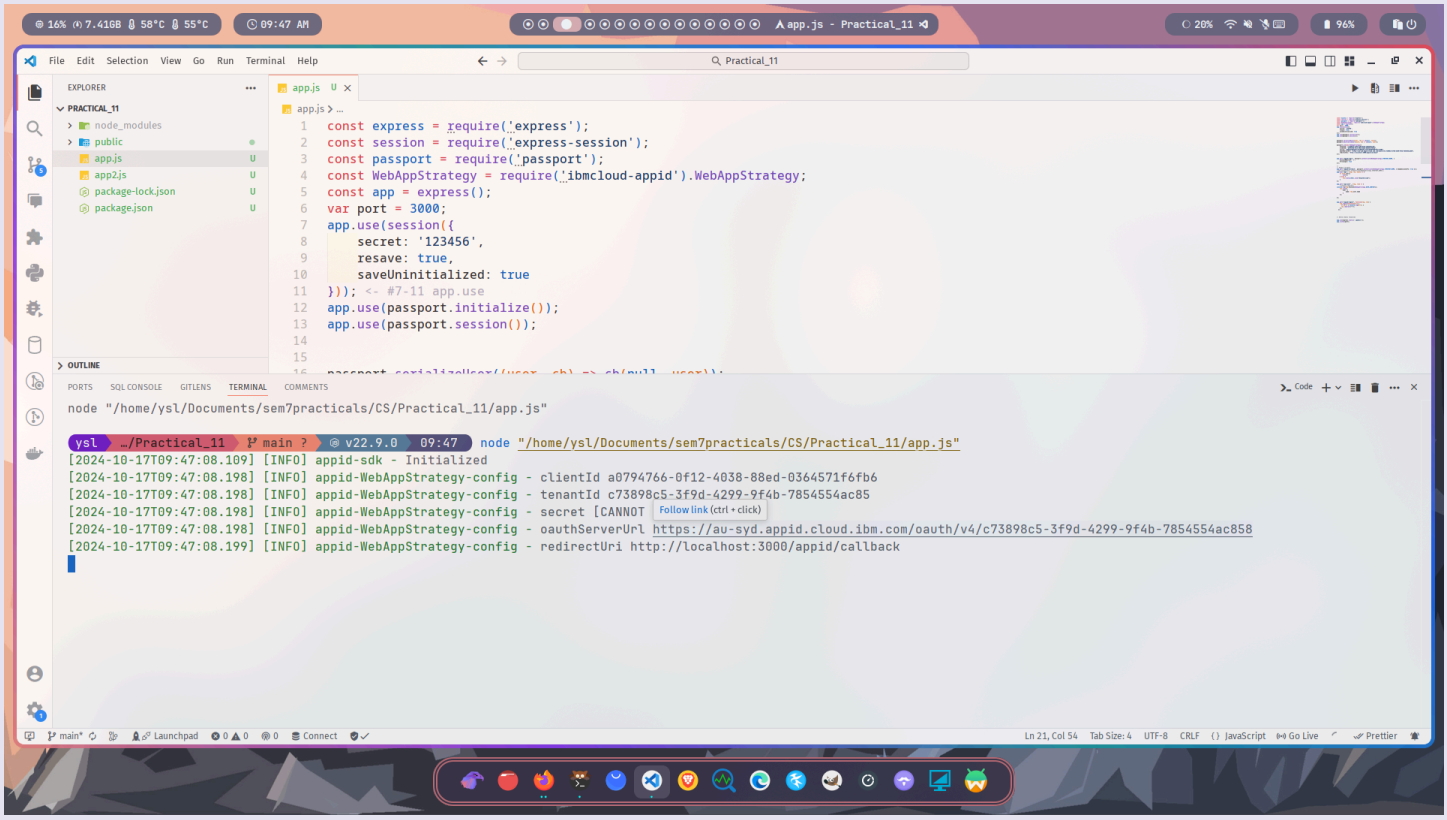
6. Run and check the signup feature if it’s working



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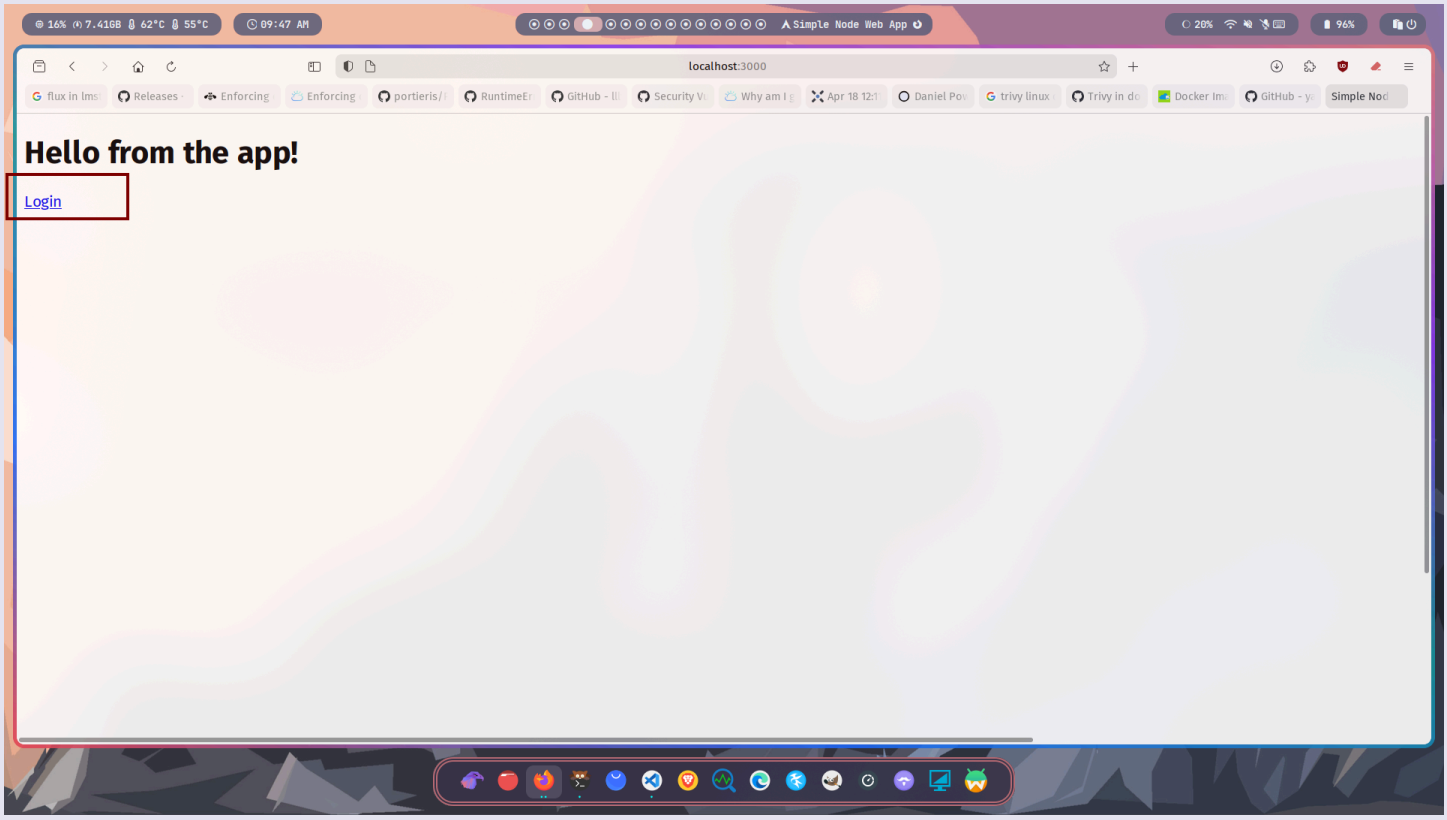

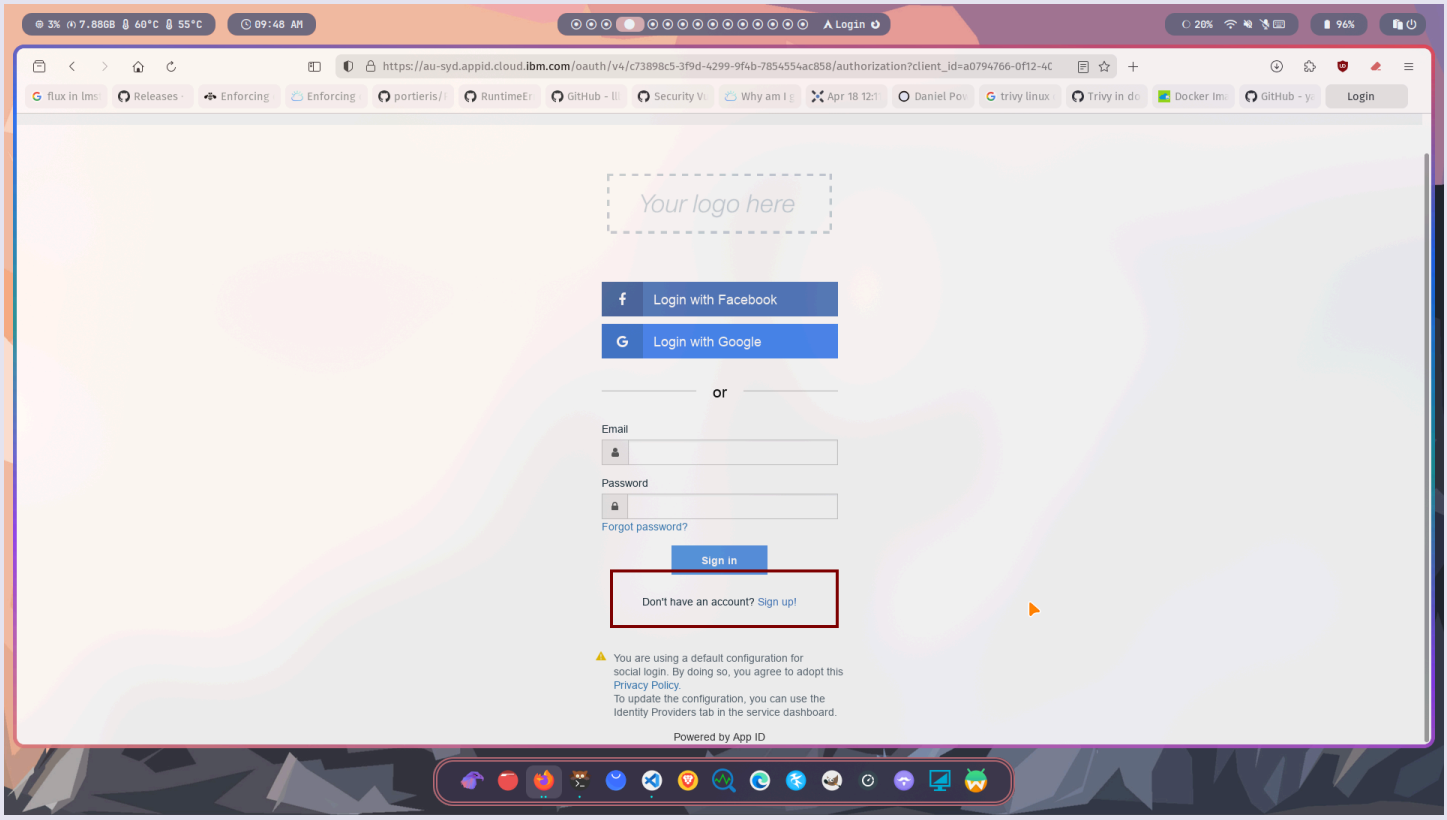

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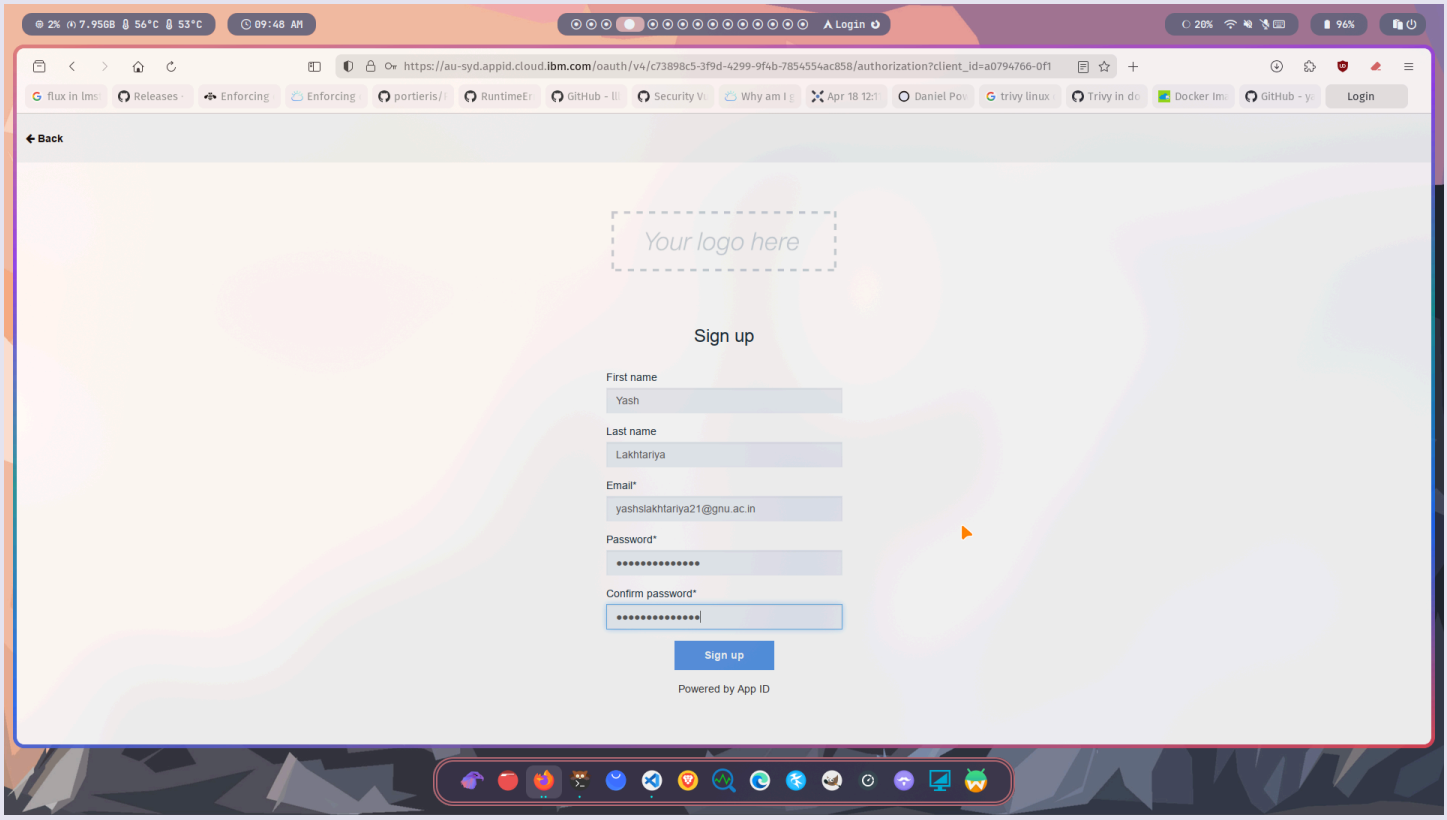

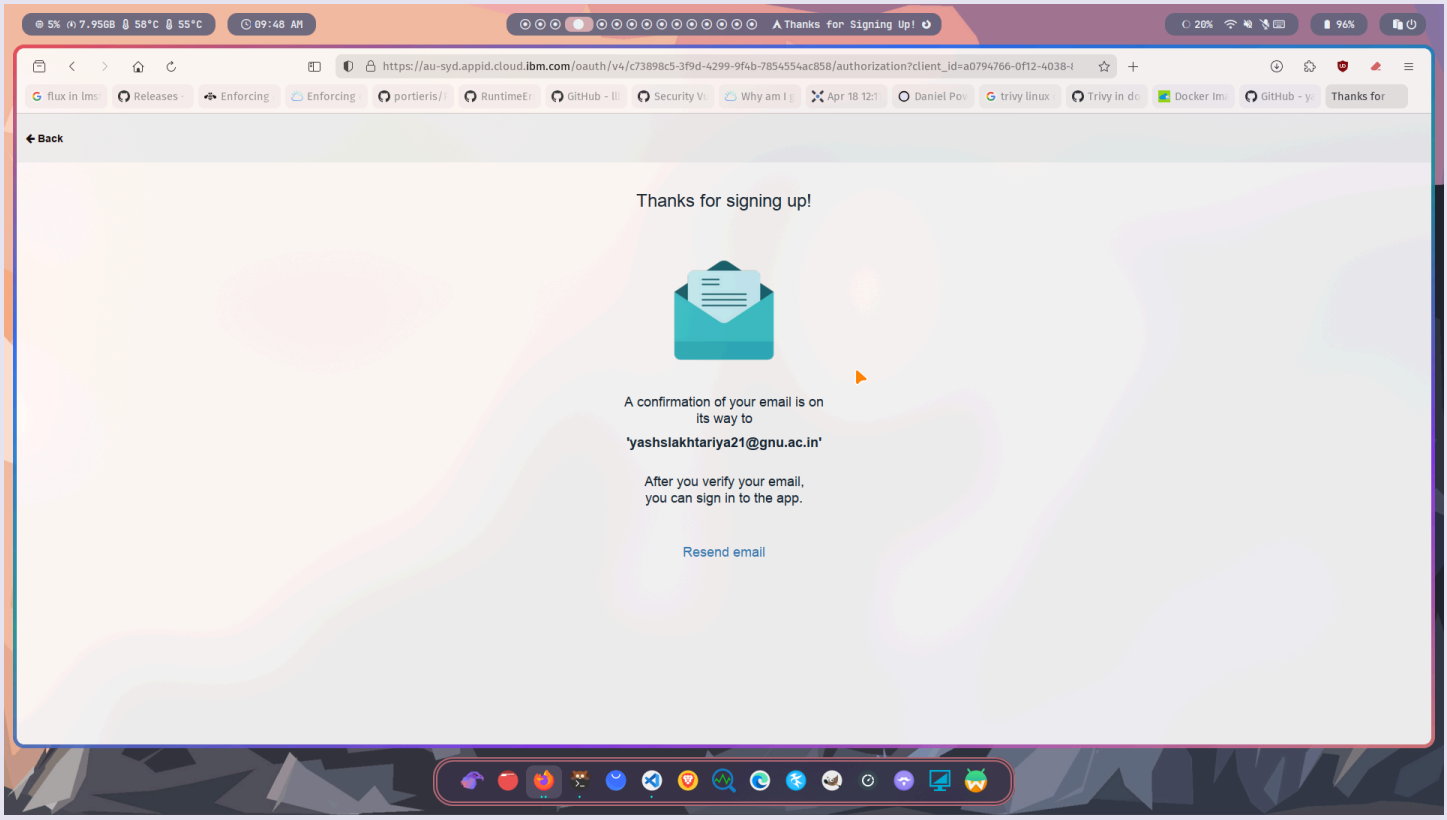

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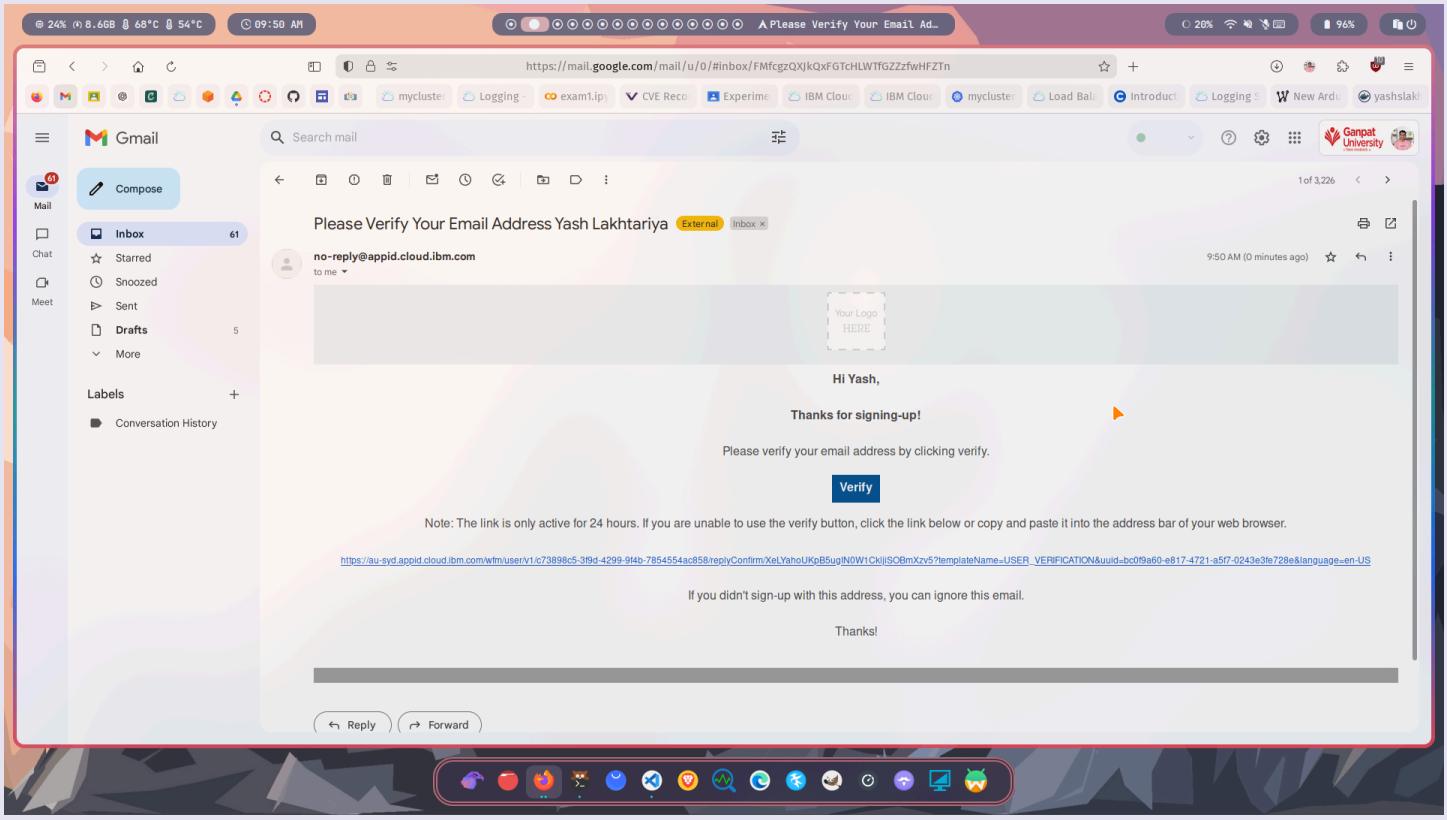

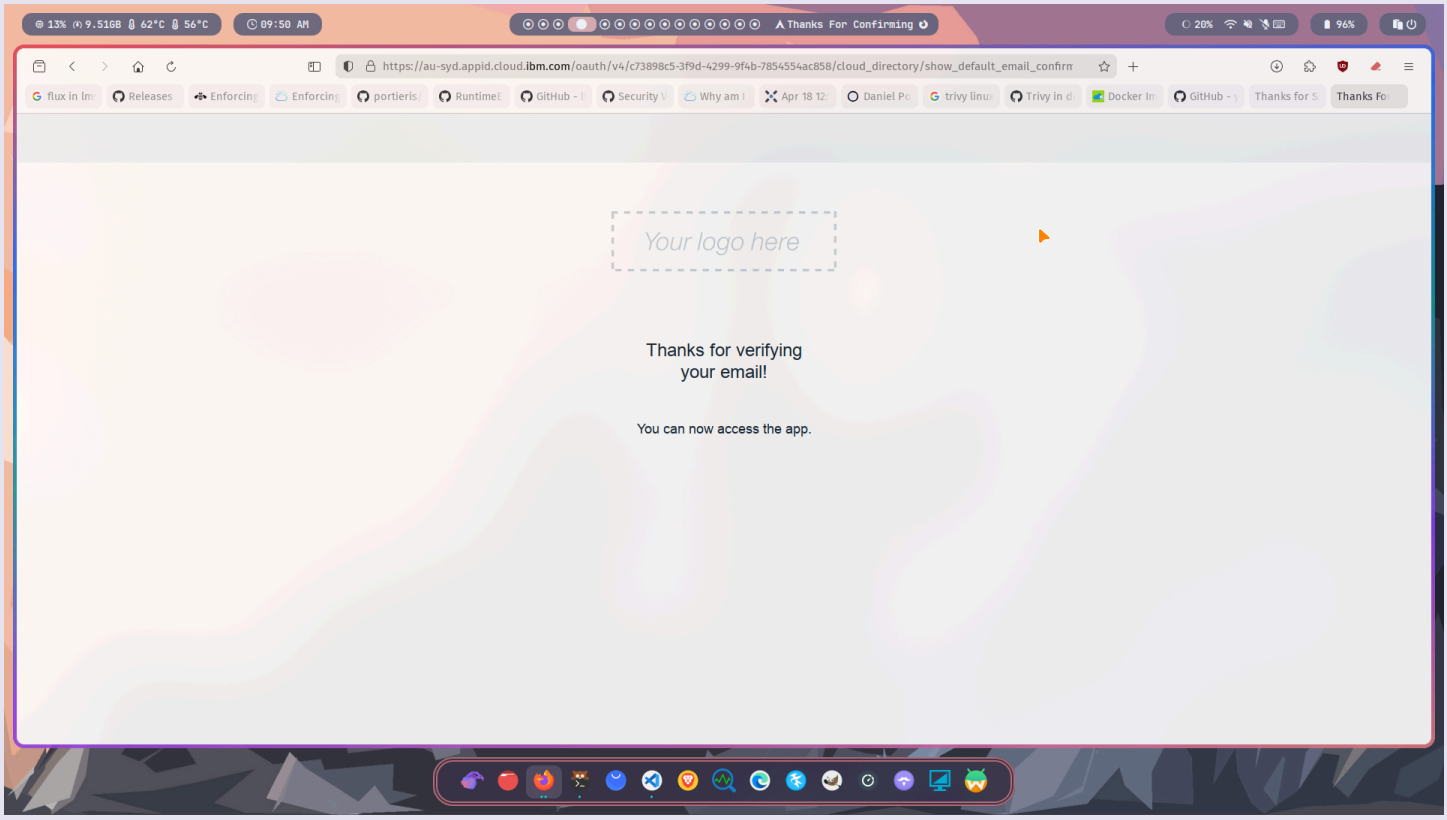

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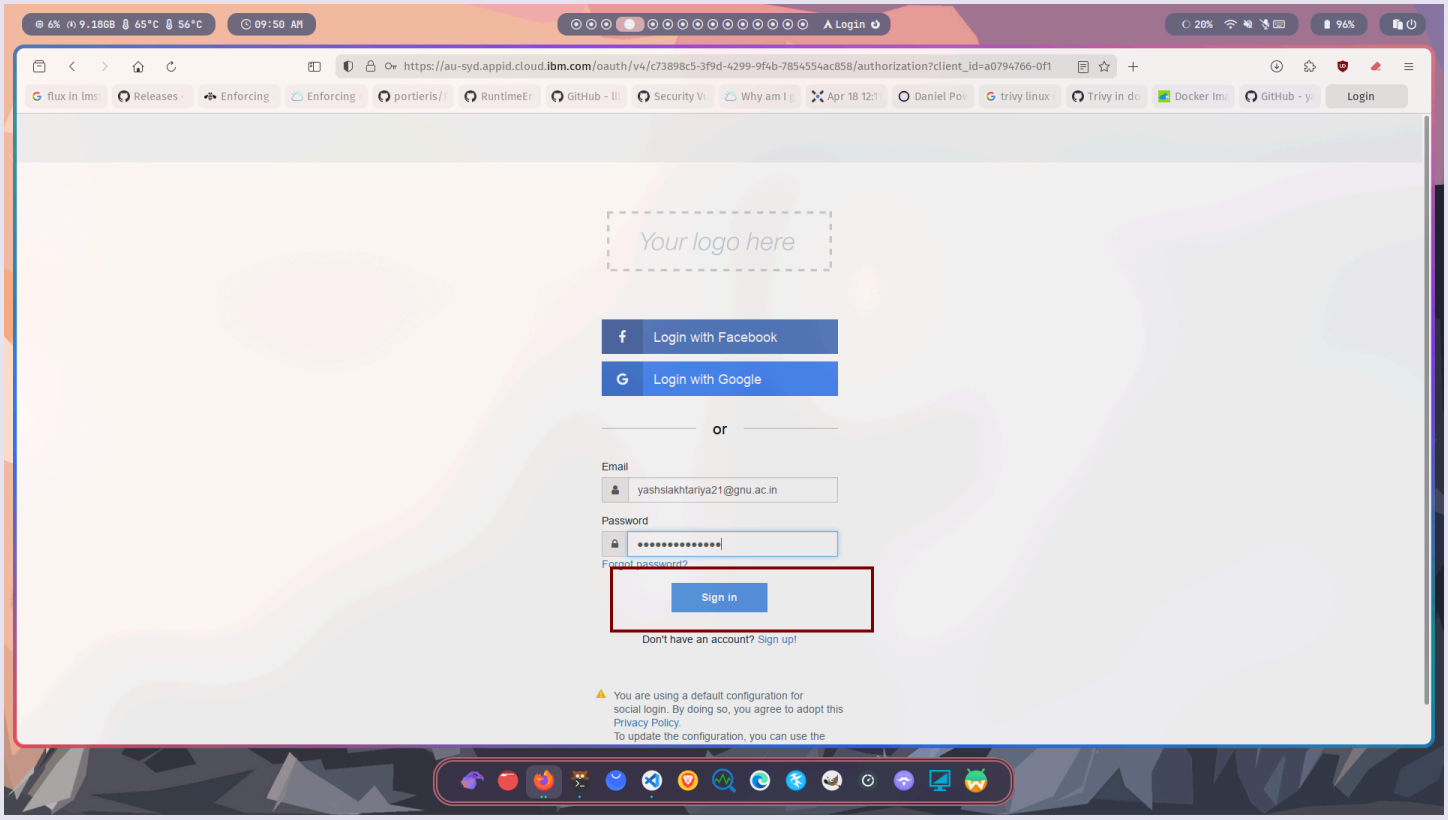

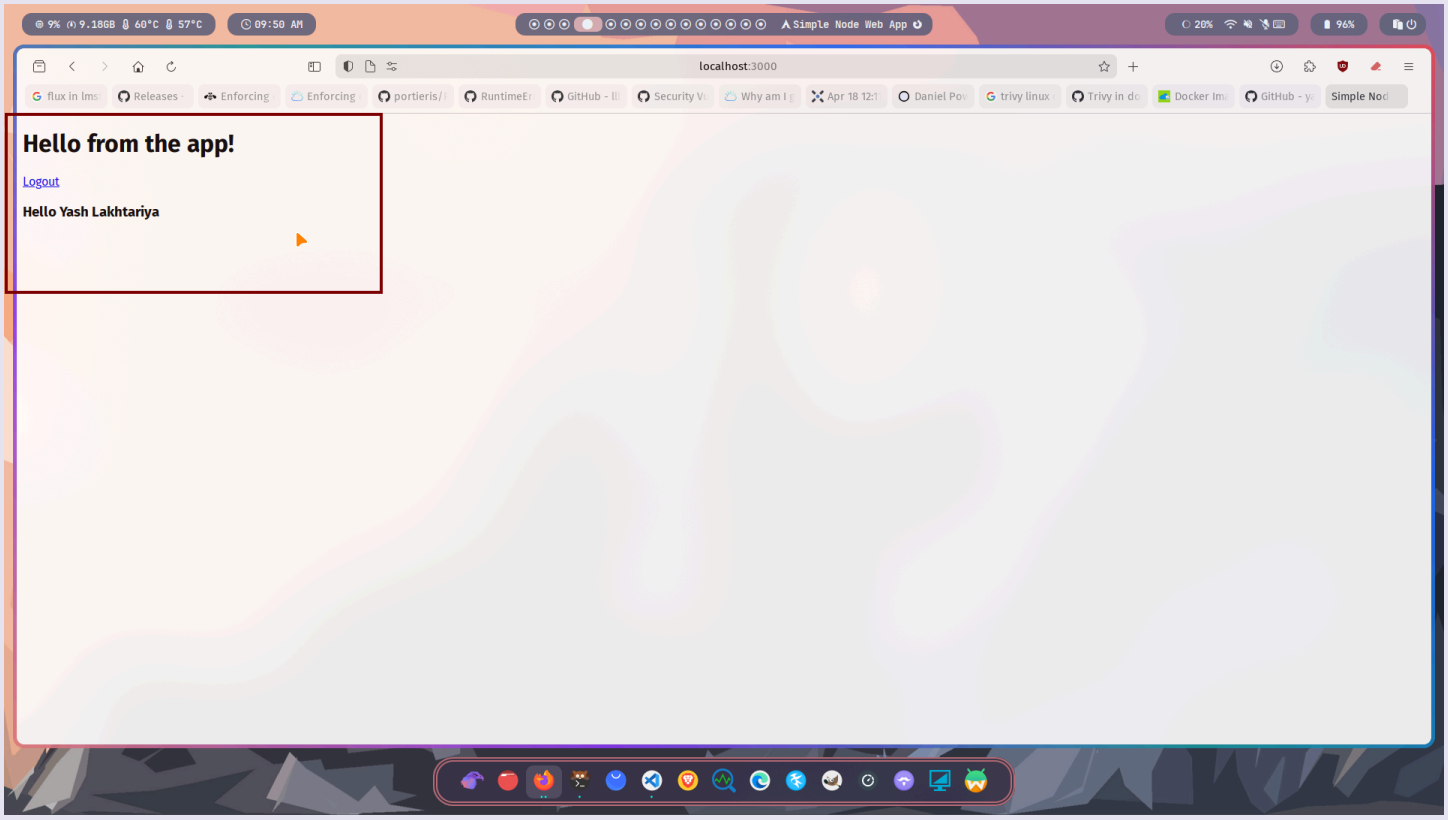

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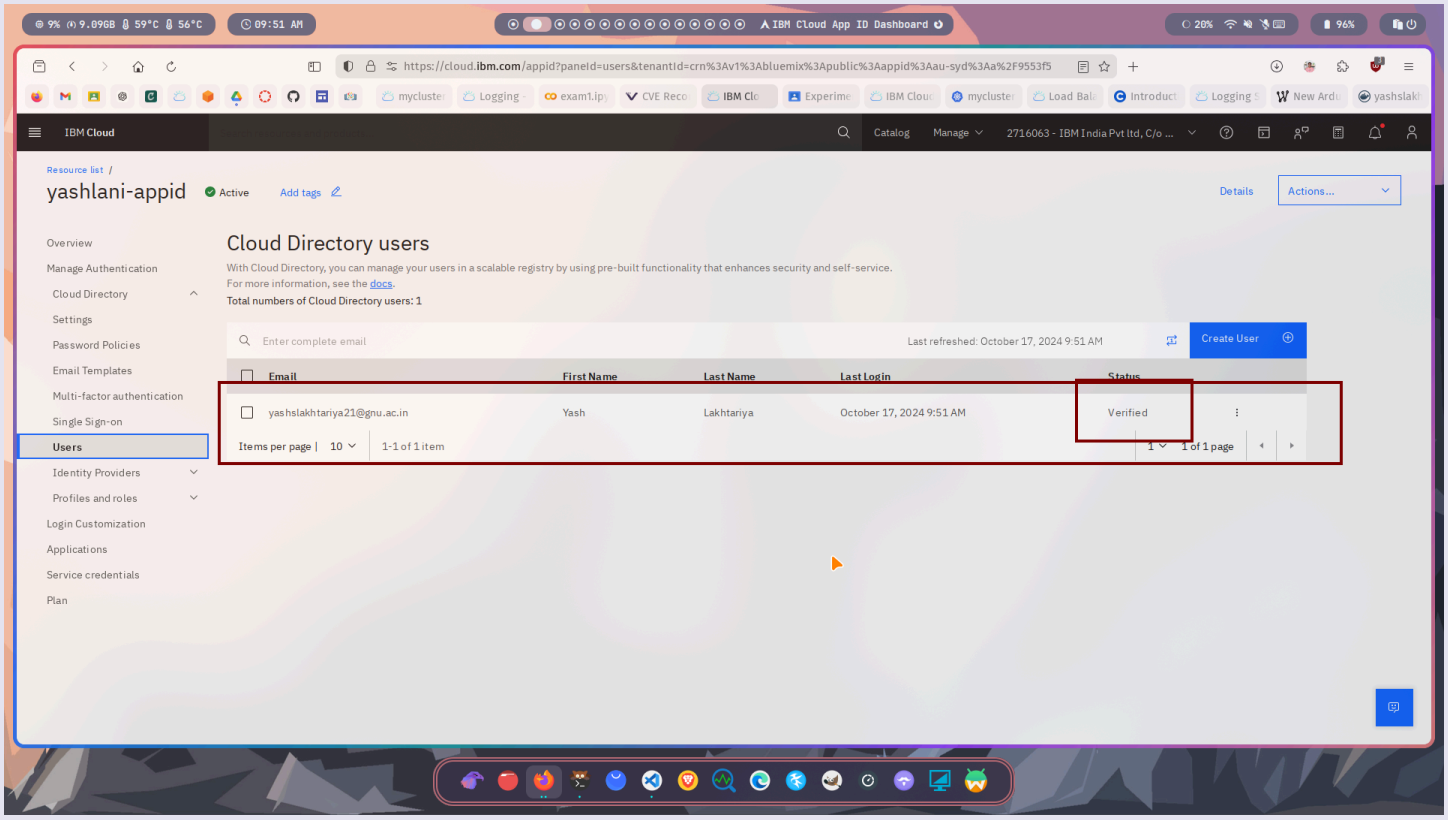

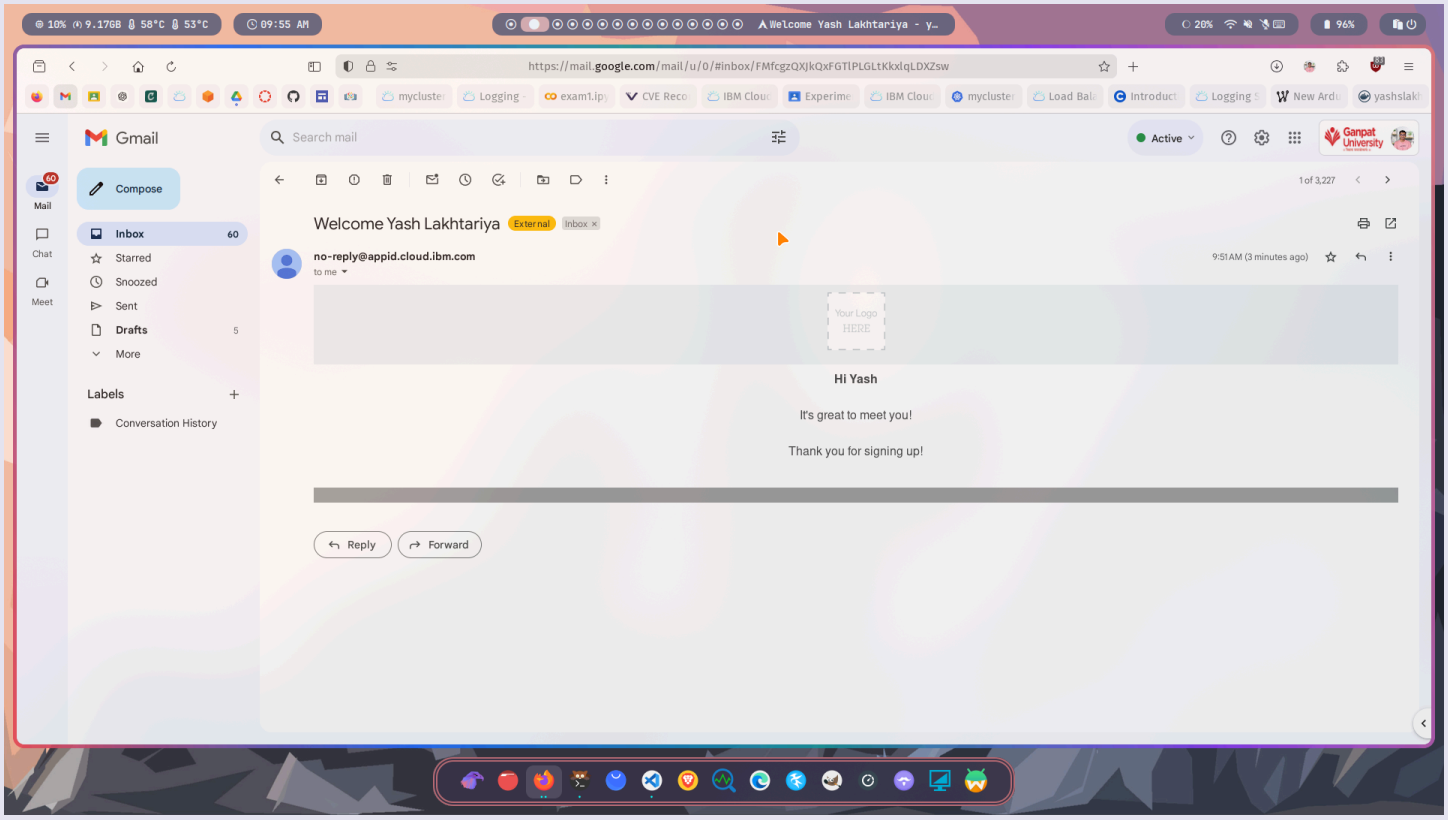

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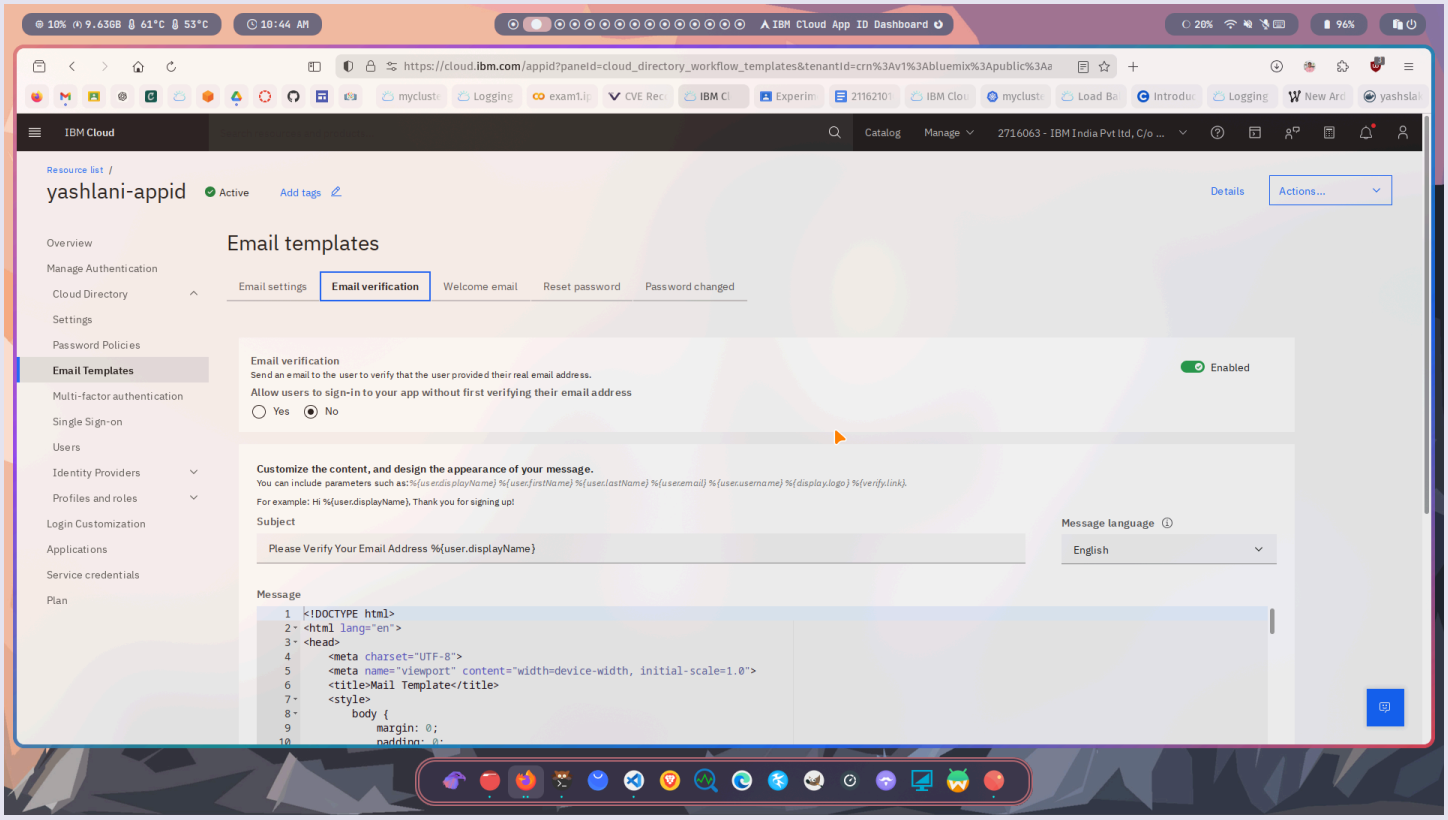
7. Now try changing the appearance of verification mail via changing template



Code :

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Mail Template</title>
    <style>
        body {
```

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```
            margin: 0;
            padding: 0;
            font-family: 'Gotham', 'Helvetica Neue', Helvetica,
Arial, sans-serif;
            background-color: #f5f5f5;
            color: #464646;
            font-size: 18px;
        }

        table {
            width: 100%;
            max-width: 600px;
            margin: 0 auto;
            border-spacing: 0;
            background-color: #ffffff;
            box-shadow: 0 4px 12px rgba(0, 0, 0, 0.1);
            border-radius: 8px;
            overflow: hidden;
        }

        td {
            padding: 20px;
            text-align: center;
        }
```

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```
.header {
    background-color: #b75969;
    padding: 20px;
}

.header img {
    object-fit: contain;
    height: 77px;
}

.content strong {
    color: #333;
    font-size: 20px;
}

.verify-button {
    display: inline-block;
    background-color: #005093;
    color: #fff;
    padding: 12px 20px;
    border-radius: 4px;
    font-weight: bold;
    text-decoration: none;
```

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```
        margin-top: 20px;
        transition: background-color 0.3s ease;
    }

    .verify-button:hover {
        background-color: #003f74;
    }

    .note {
        font-size: 14px;
        color: #757575;
        margin-top: 20px;
    }

    .footer {
        background-color: #b75969;
        padding: 10px;
        color: #ffffff;
        font-size: 12px;
    }

    a {
        color: #b75969;
        text-decoration: none;
```

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```
            word-wrap: break-word;
        }
    </style>
</head>
<body>
    <table>
        <tr class="header">
            <td>
                <img src="%{display.logo}" alt="logo">
            </td>
        </tr>
        <tr>
            <td class="content">
                <strong>Cham sa %{user.firstName}!,<br><br>Jodava
maate aabhar!</strong><br><br>
                Ahiya neche click karo to verify thase, nakar
dhabadko!<br><br>
                <a href="%{verify.link}"
class="verify-button">Verify</a><br><br>
                <span class="note">
                    Note: Jaldi karo nakar
%{linkExpiration.hours} kalak ma dhabadko! Button nahi dabatu?
To neche link ne copy paste karo tamara browser na mathe.
                </span><br><br>
```

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```
                <a
href="%{verify.link}">%{verify.link}</a><br><br>
                Jo tame sign up nathi karyu to tel vada thaao,
you can ignore this email.<br><br>
                Aabhar tamaro!
            </td>
        </tr>
        <tr class="footer">
            <td>&copy; 2024 Your Company. All Rights
Reserved.</td>
        </tr>
    </table>
</body>
</html>
```

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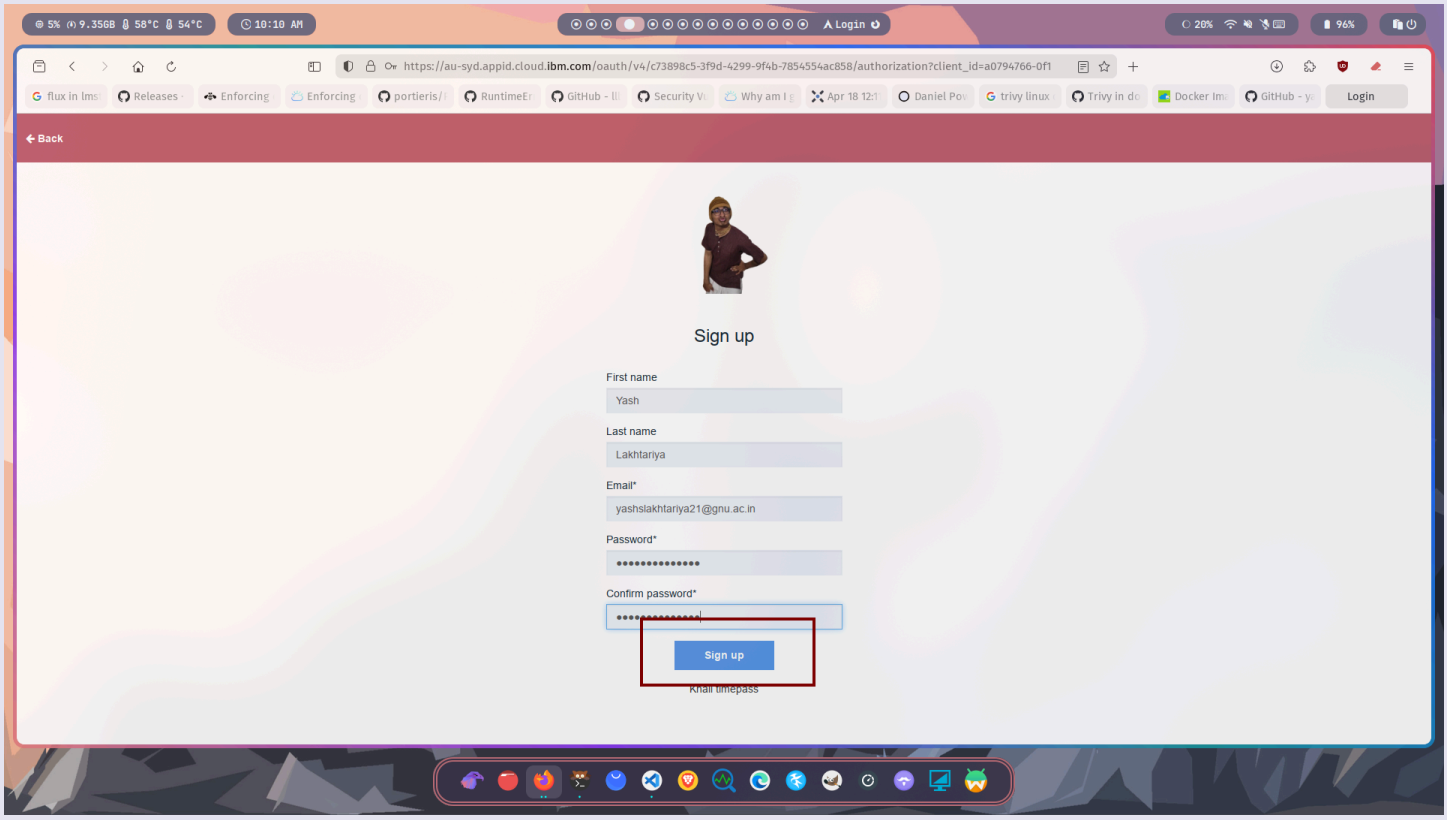

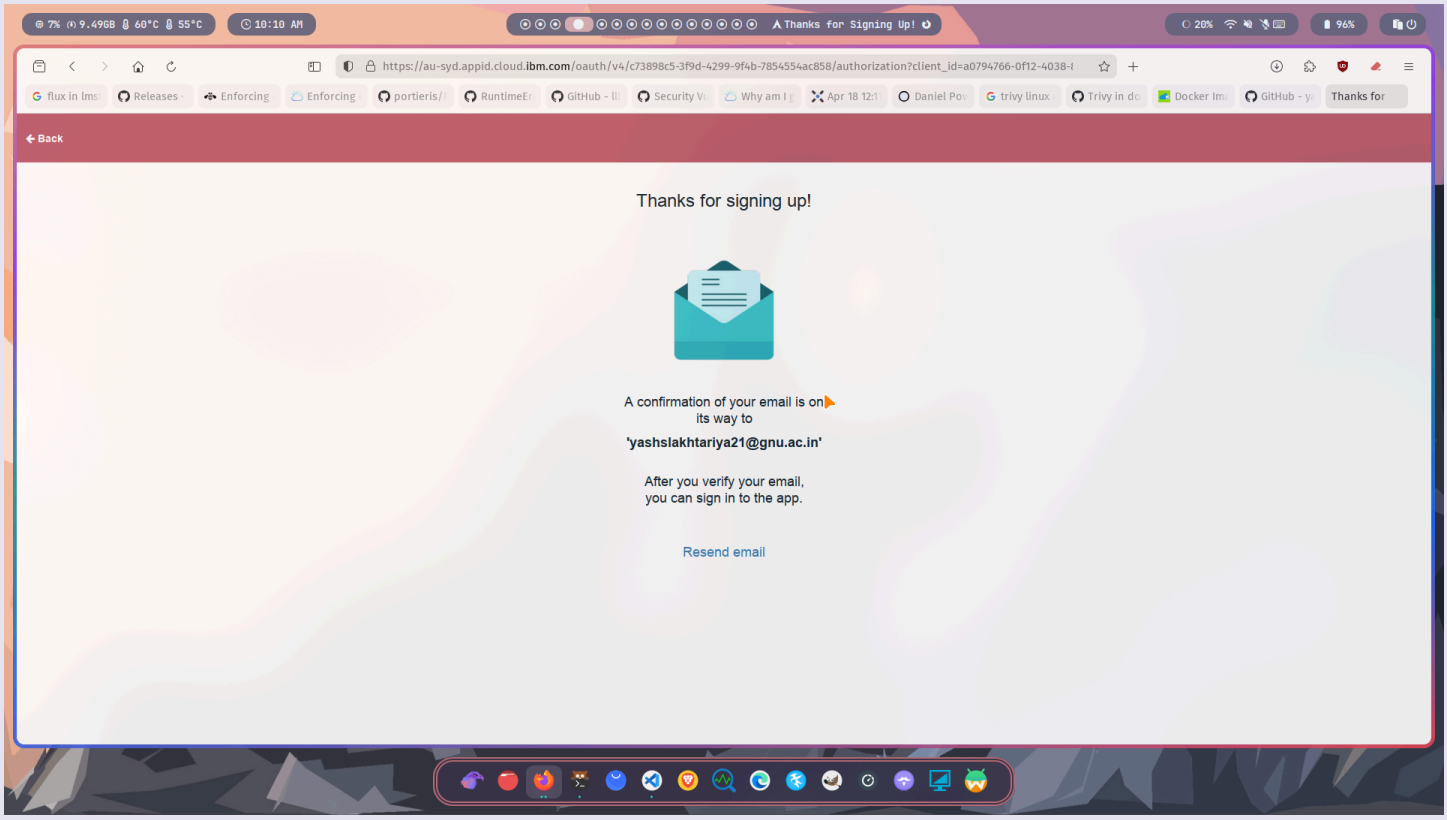

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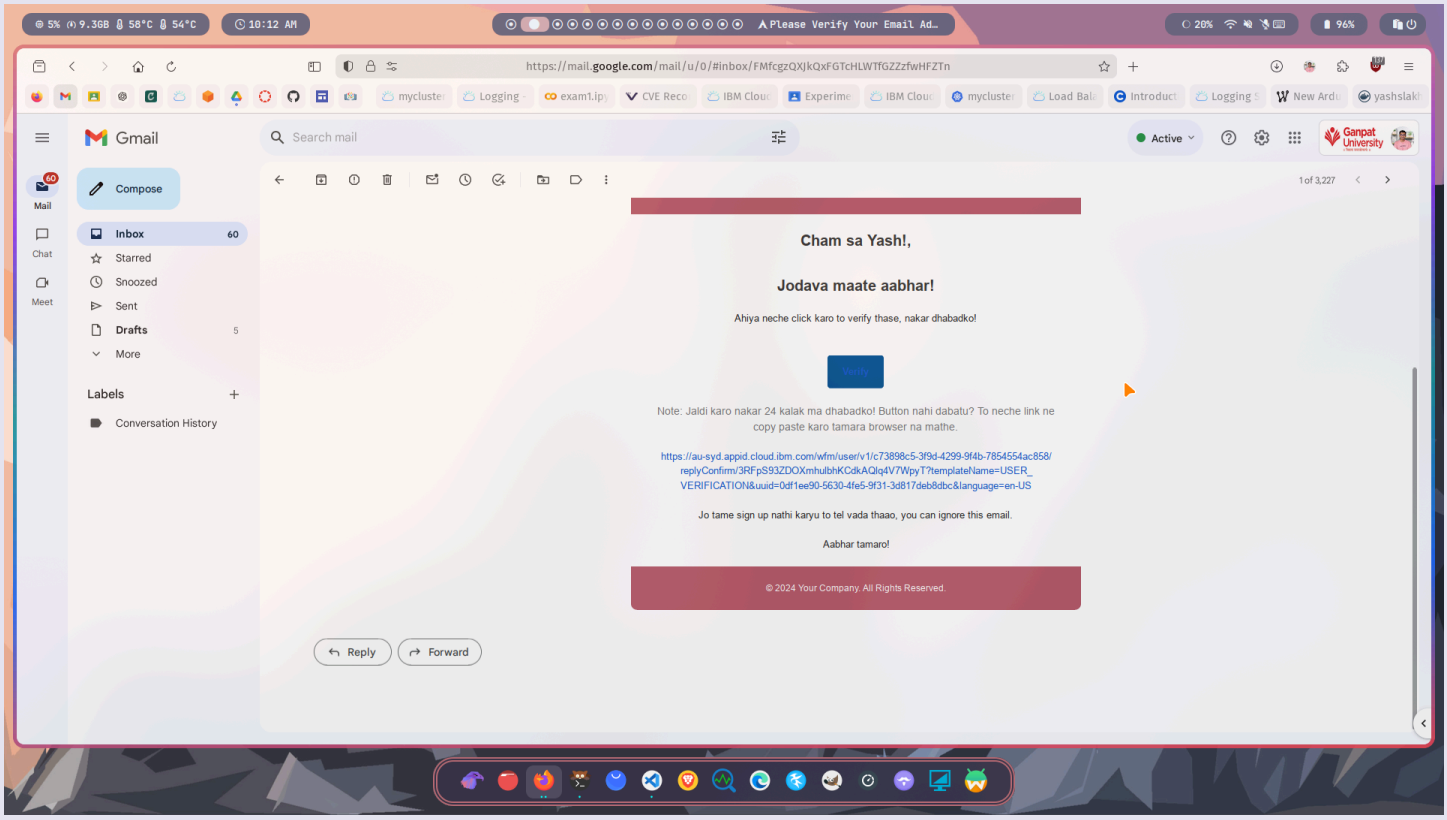

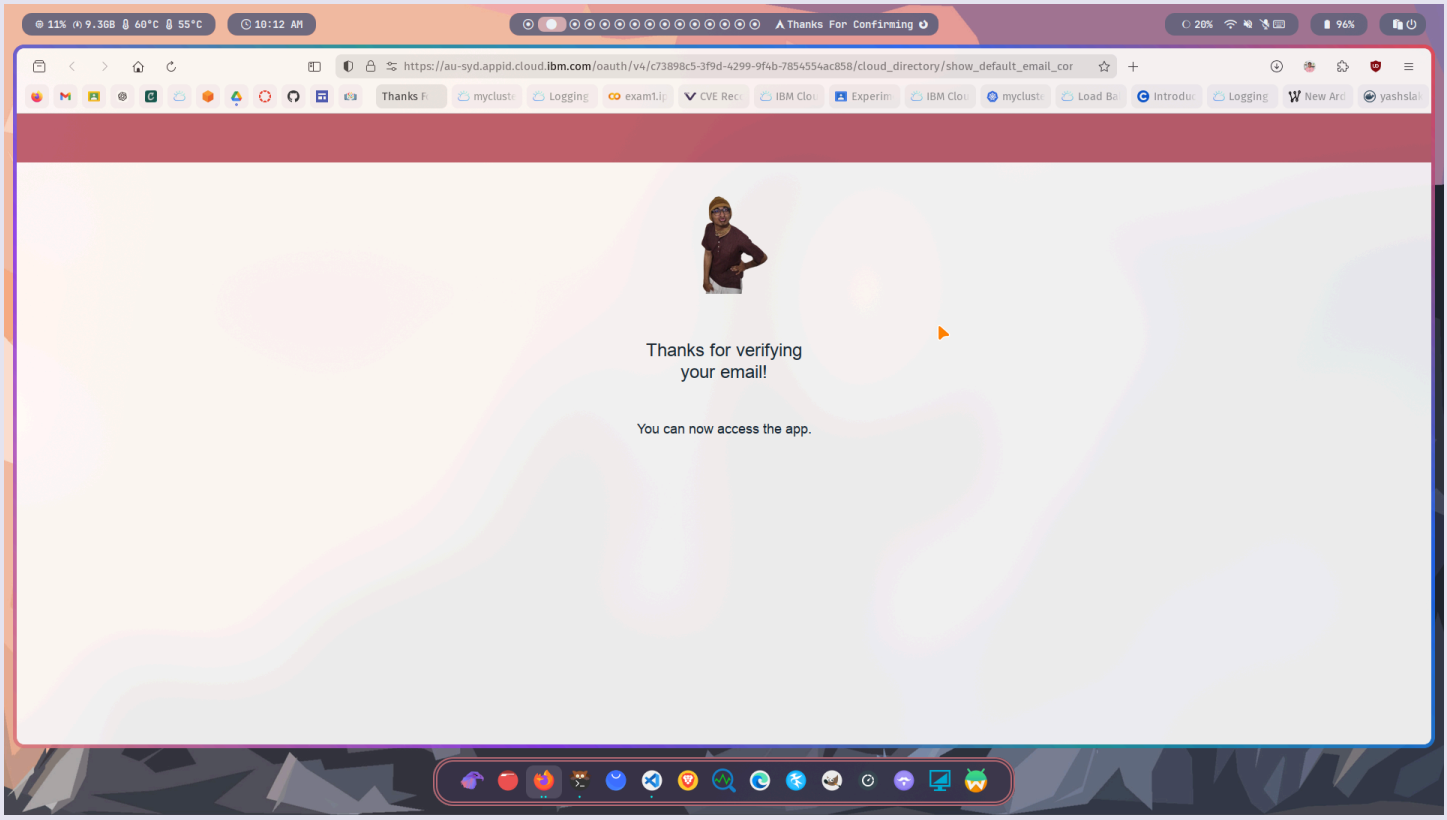

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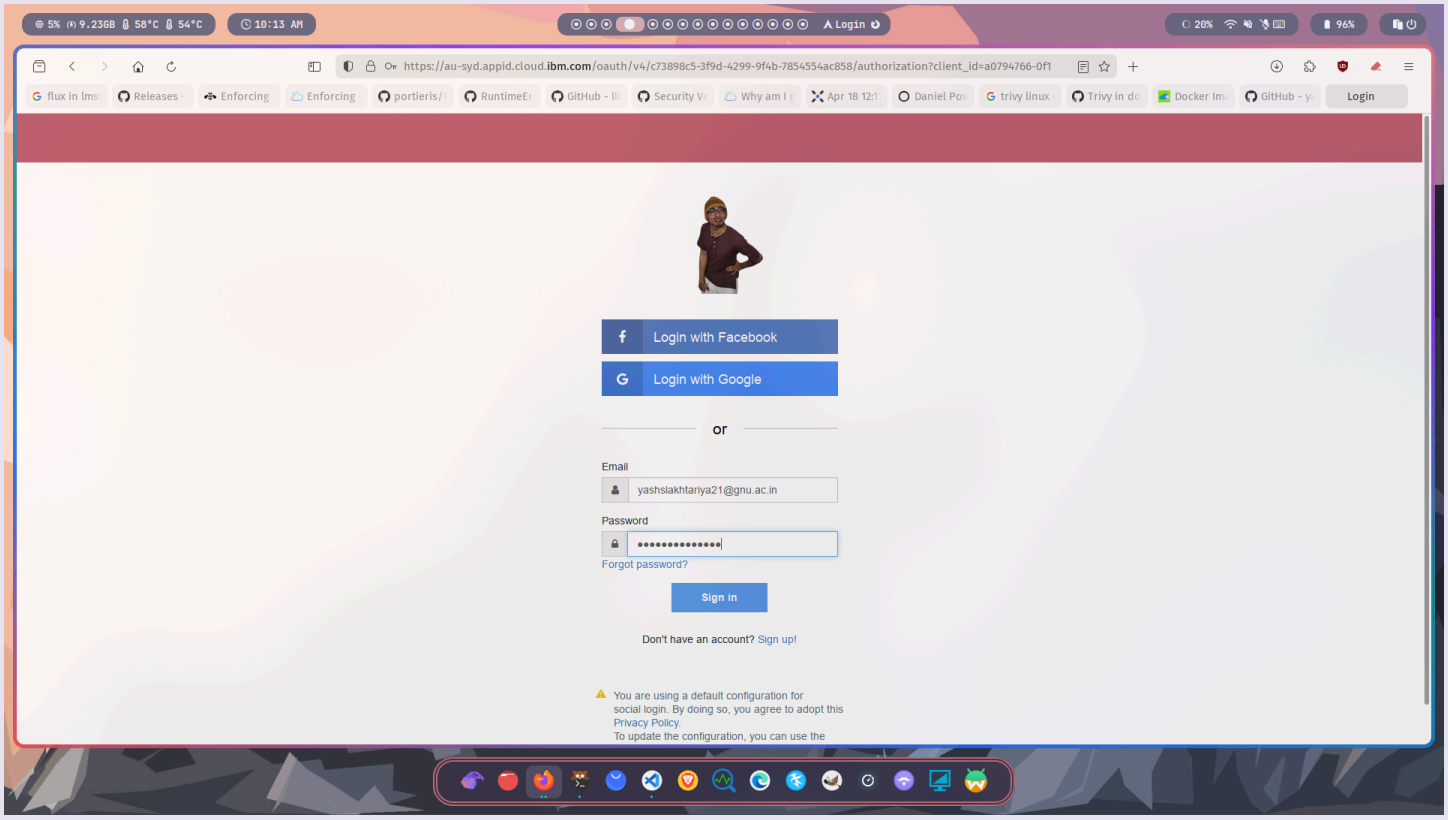

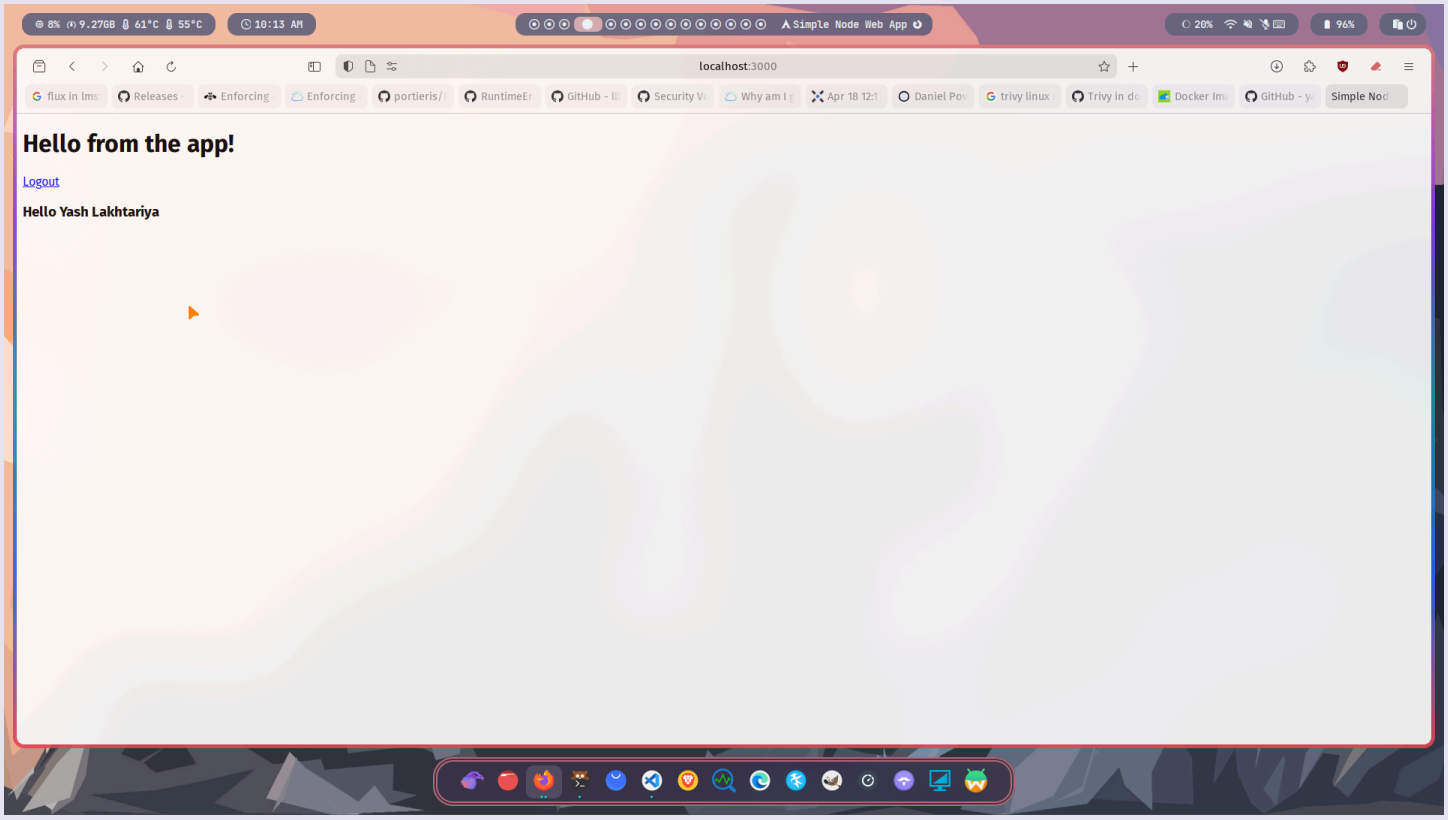

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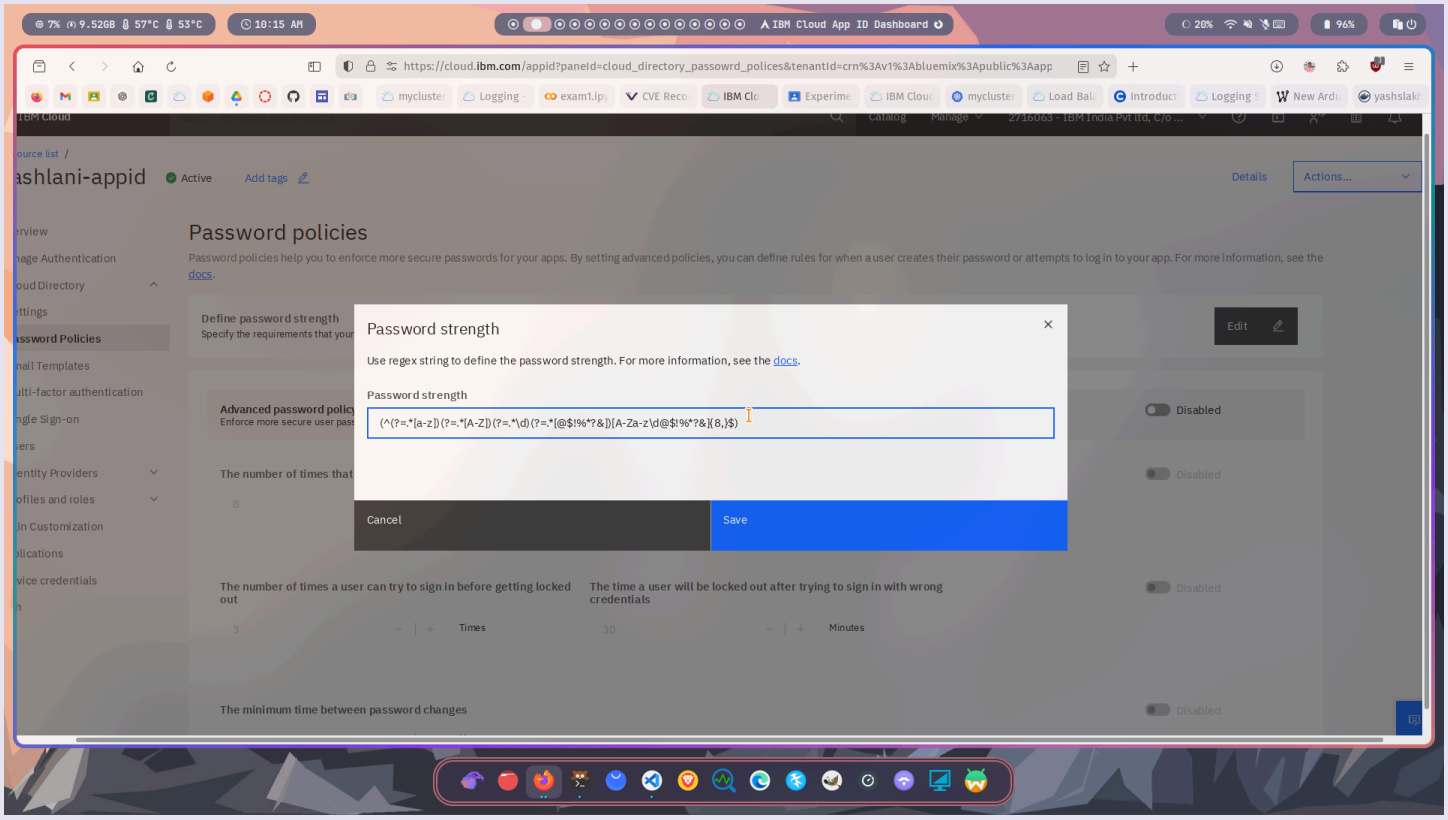
8. Now, change password policy and add regex for restrictions



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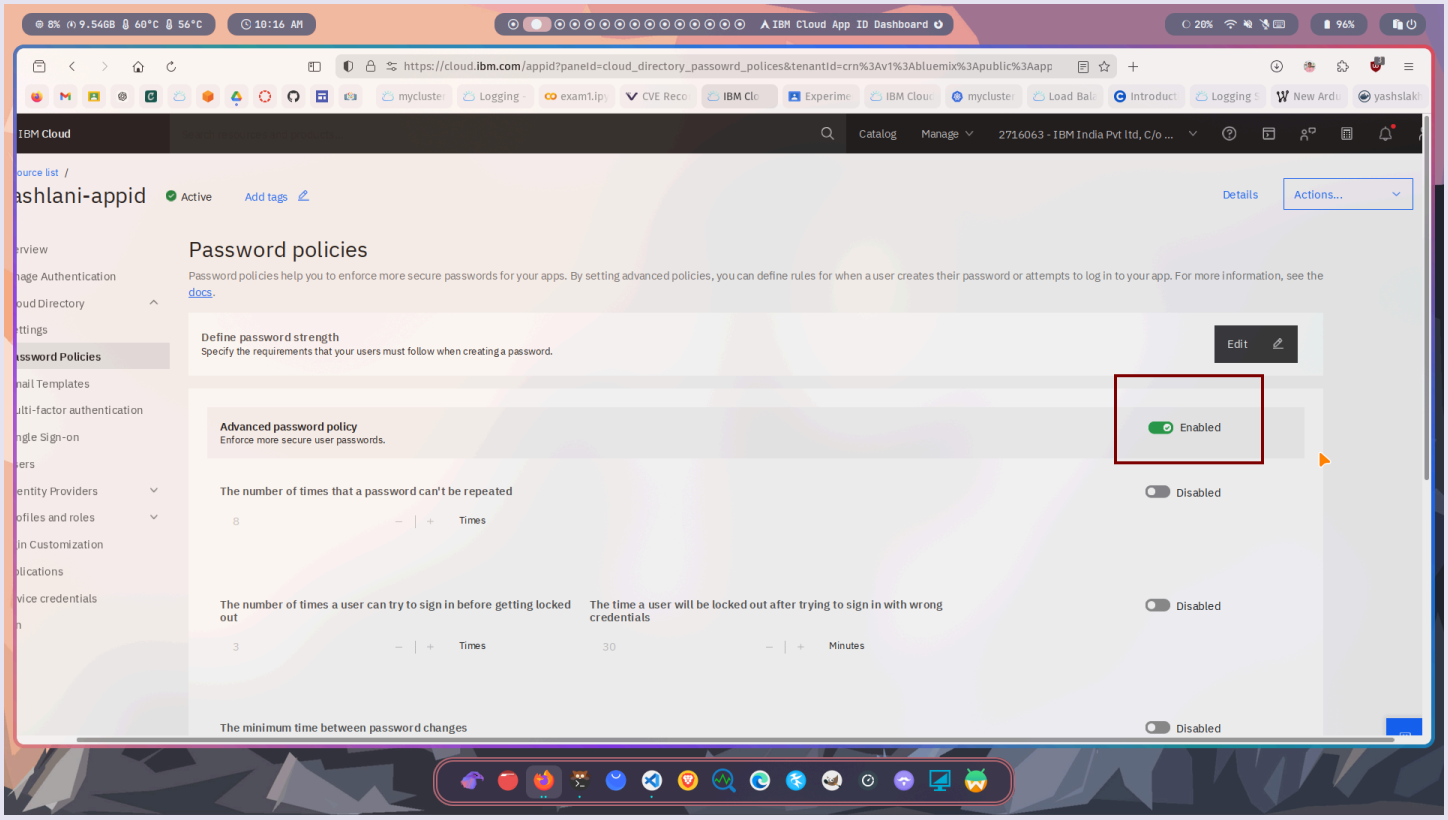
9. Also try changing advanced policies and test respectively



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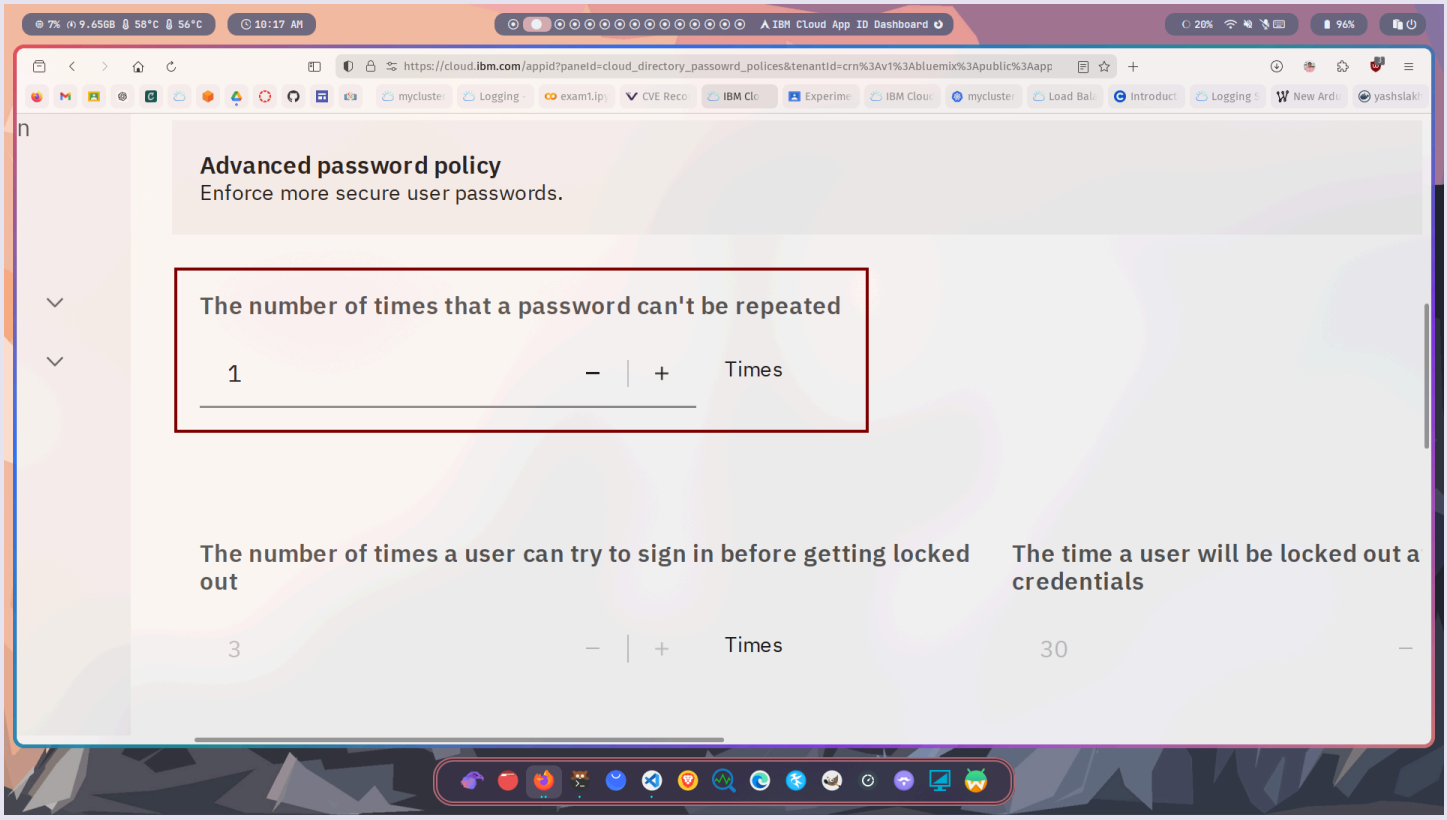

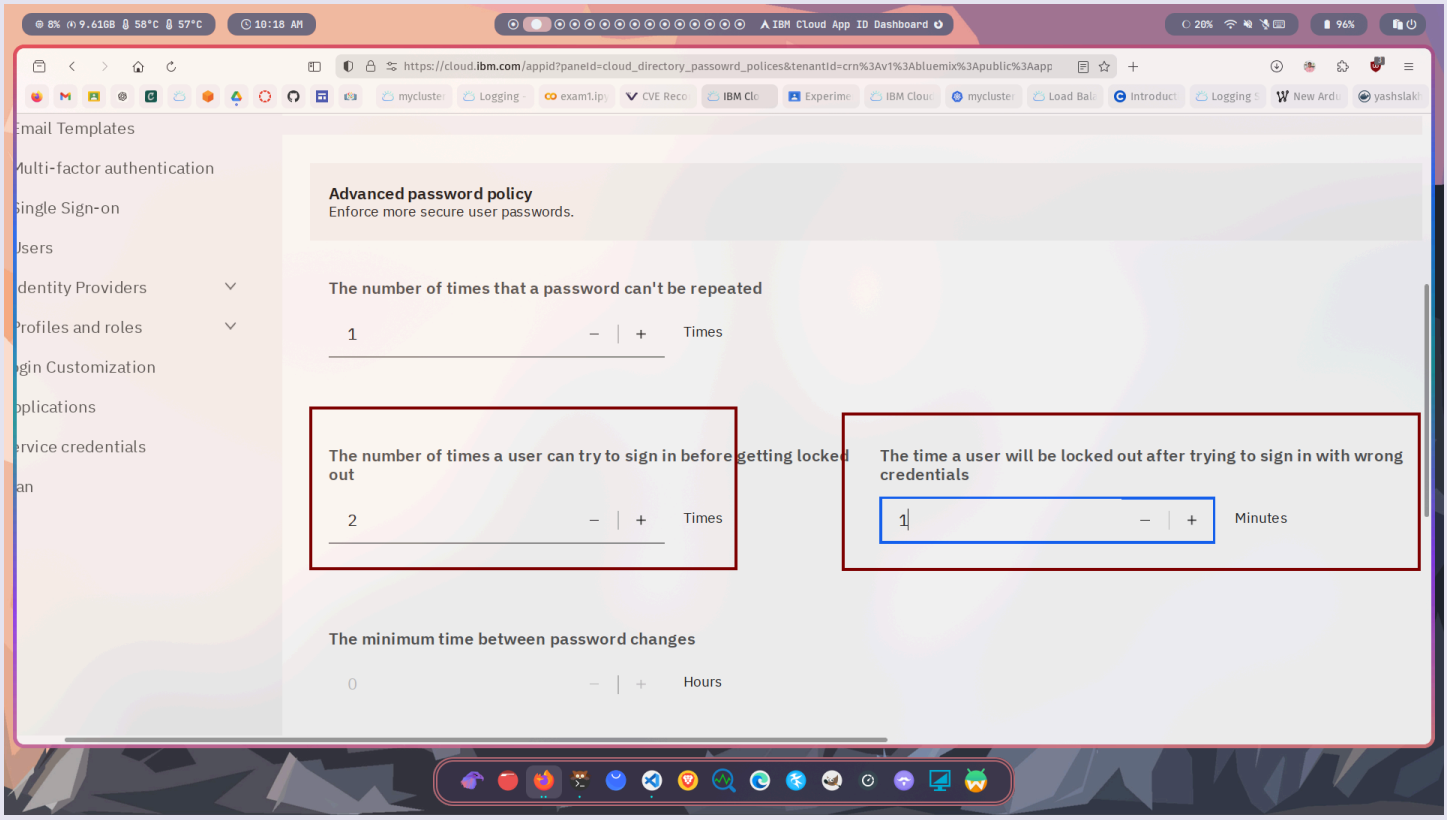

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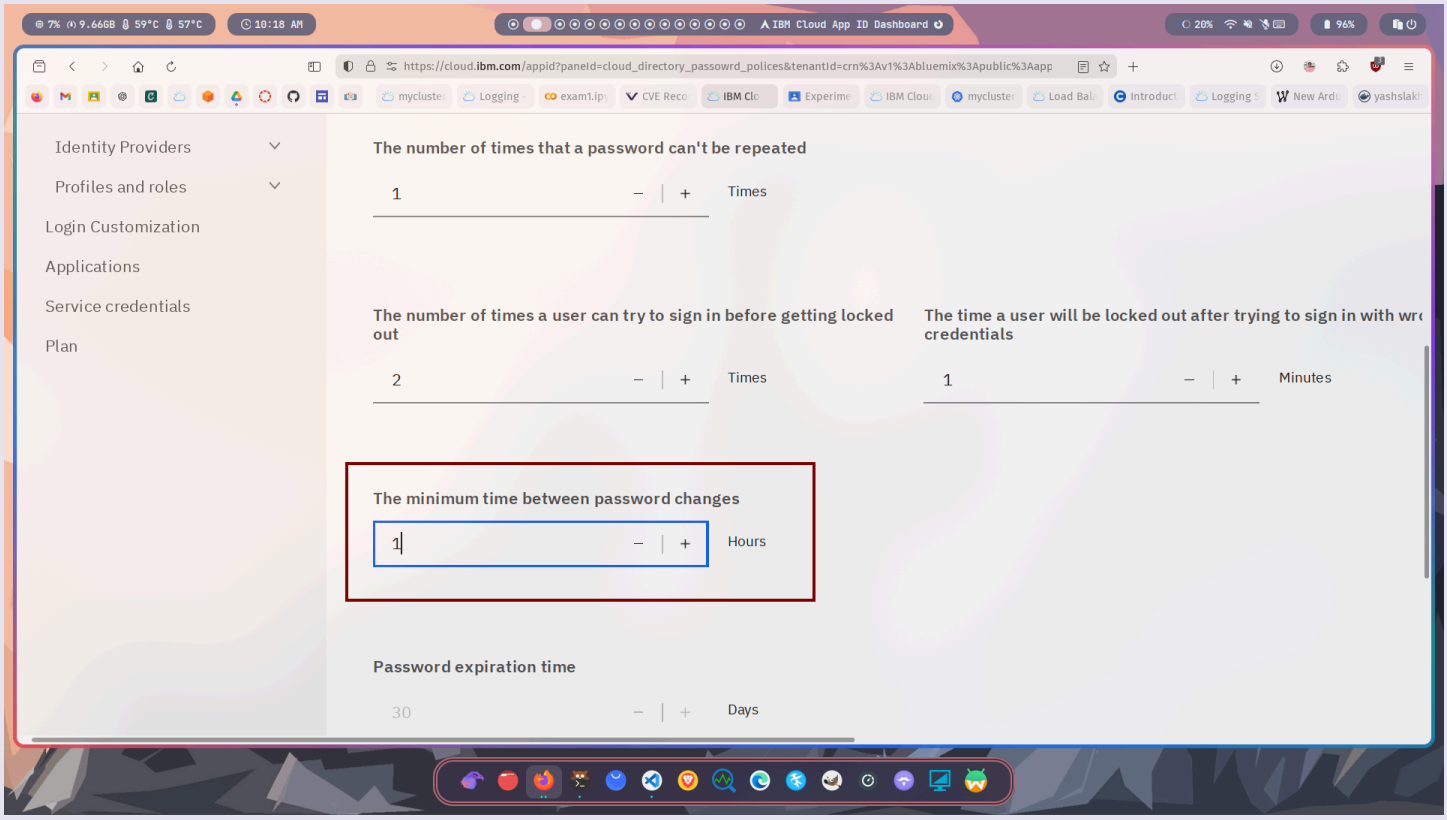

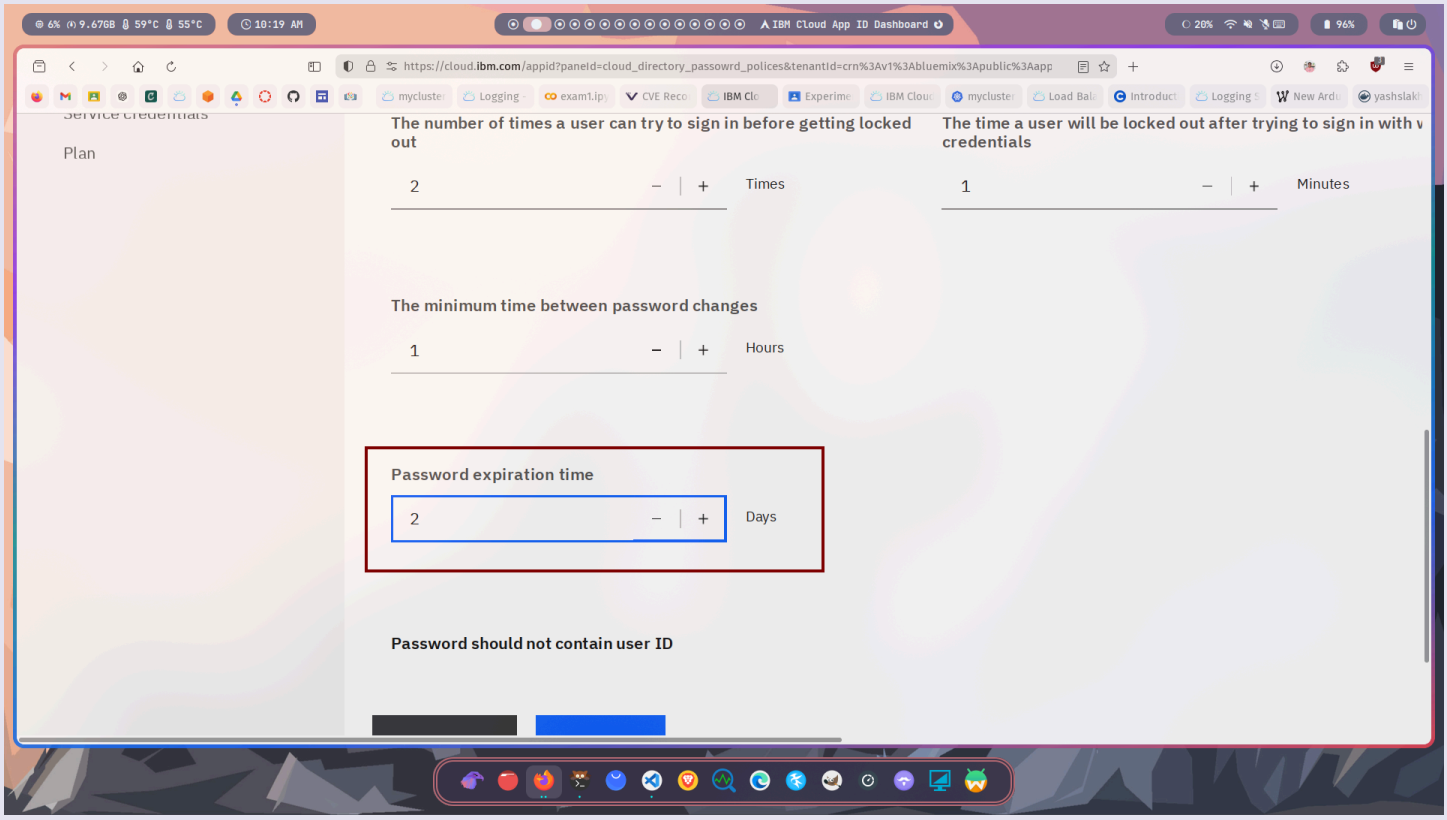

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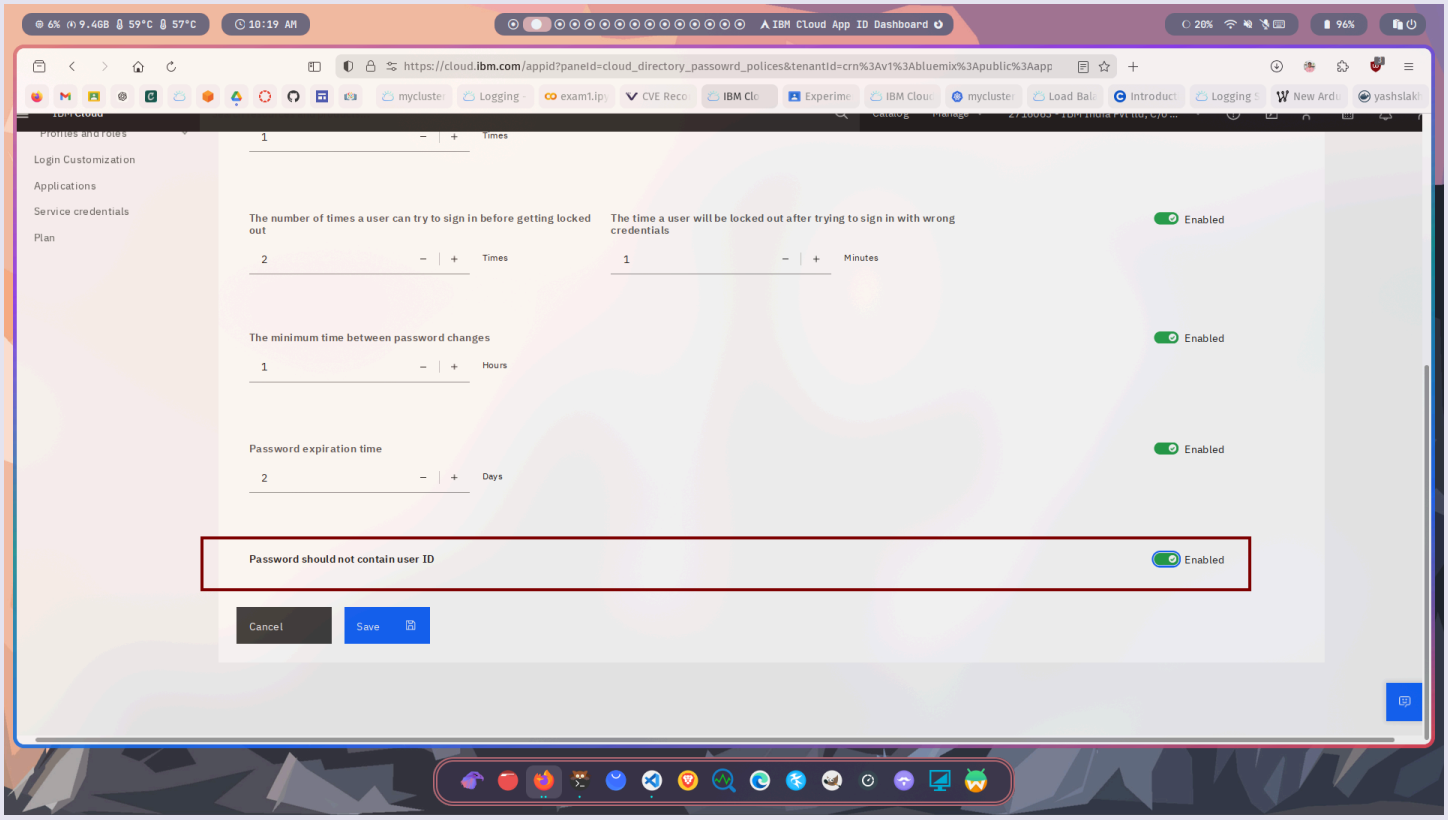

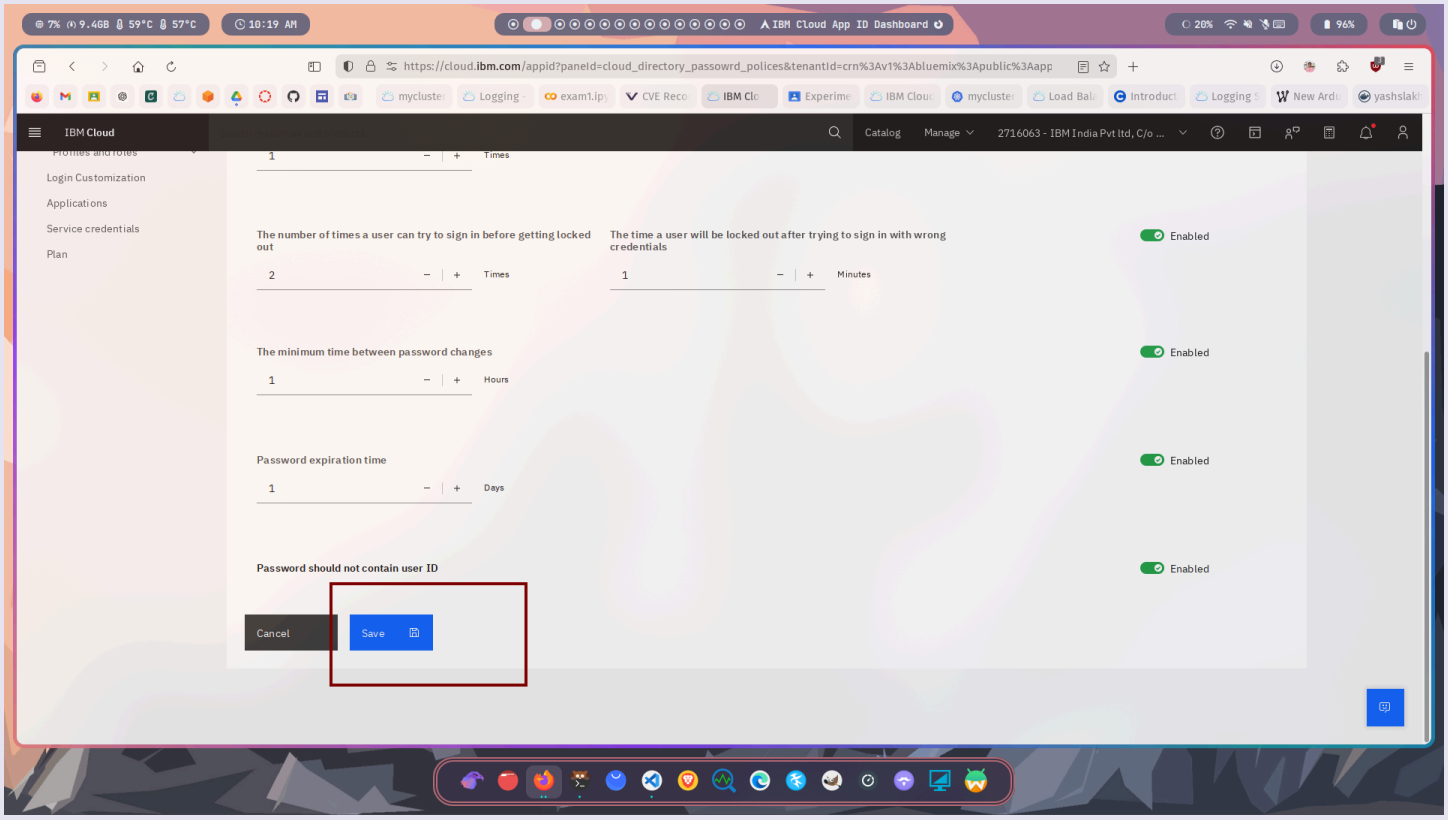

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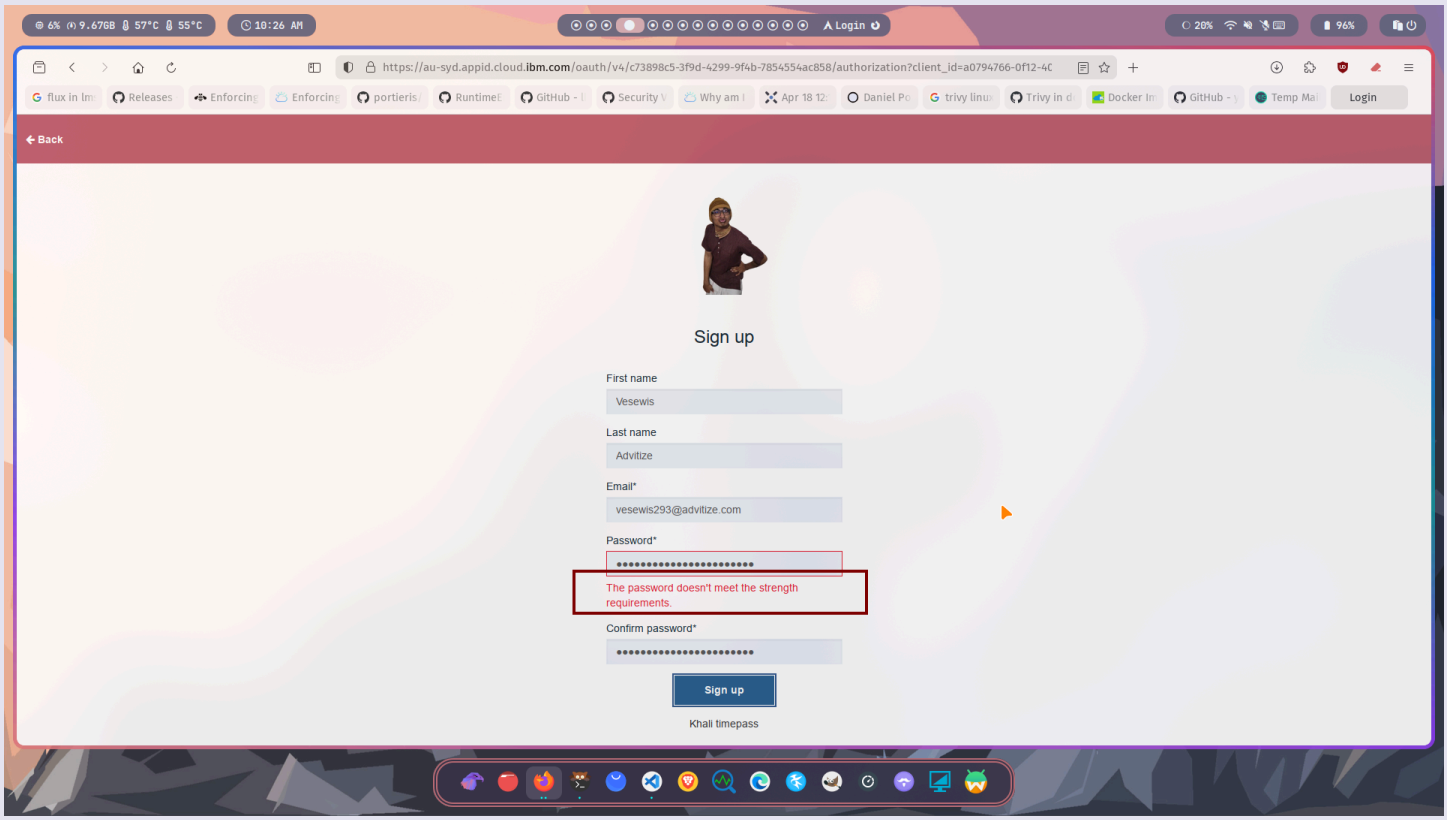
10. Now test the policies if they work

a) Regex requirement



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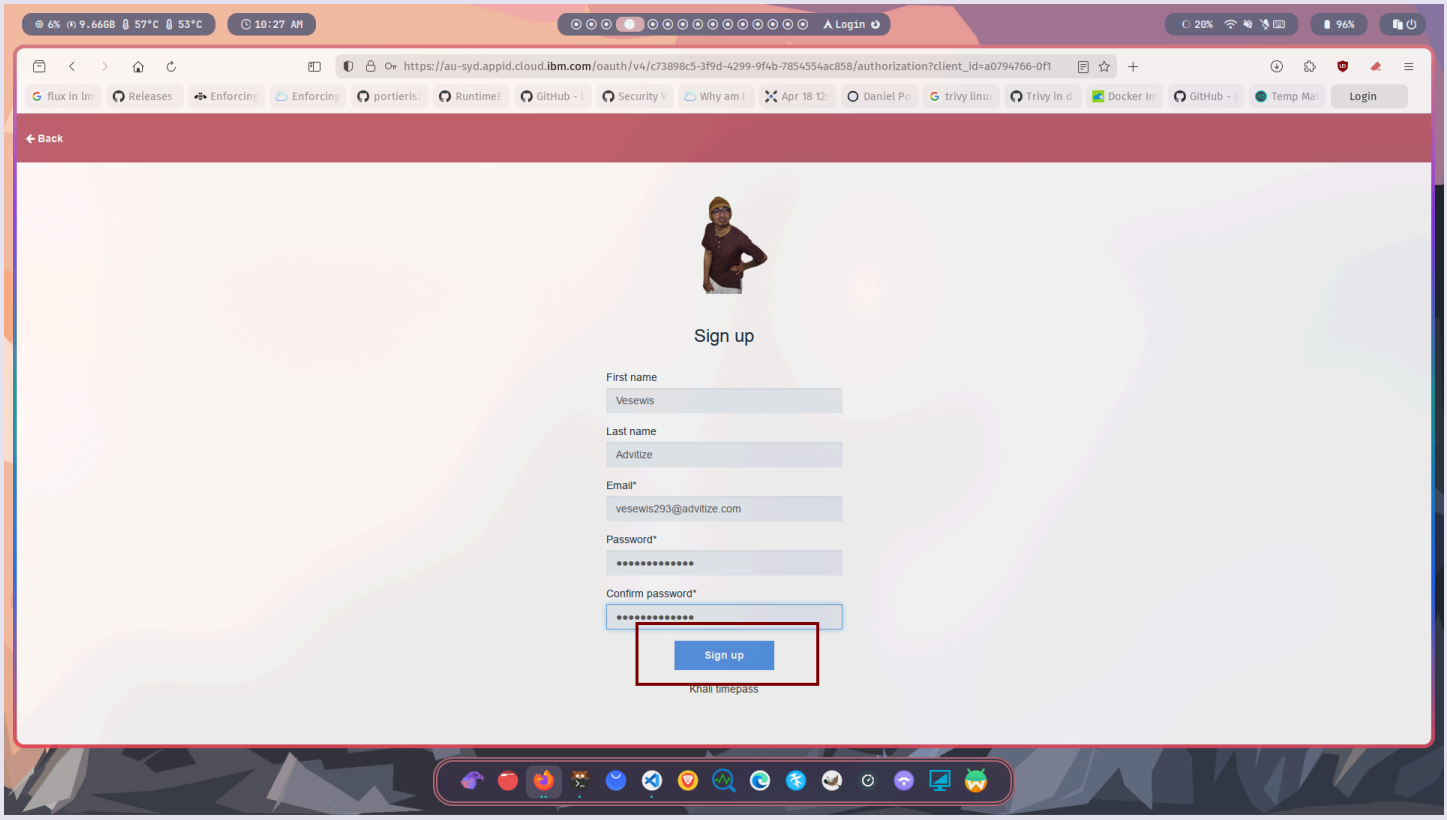

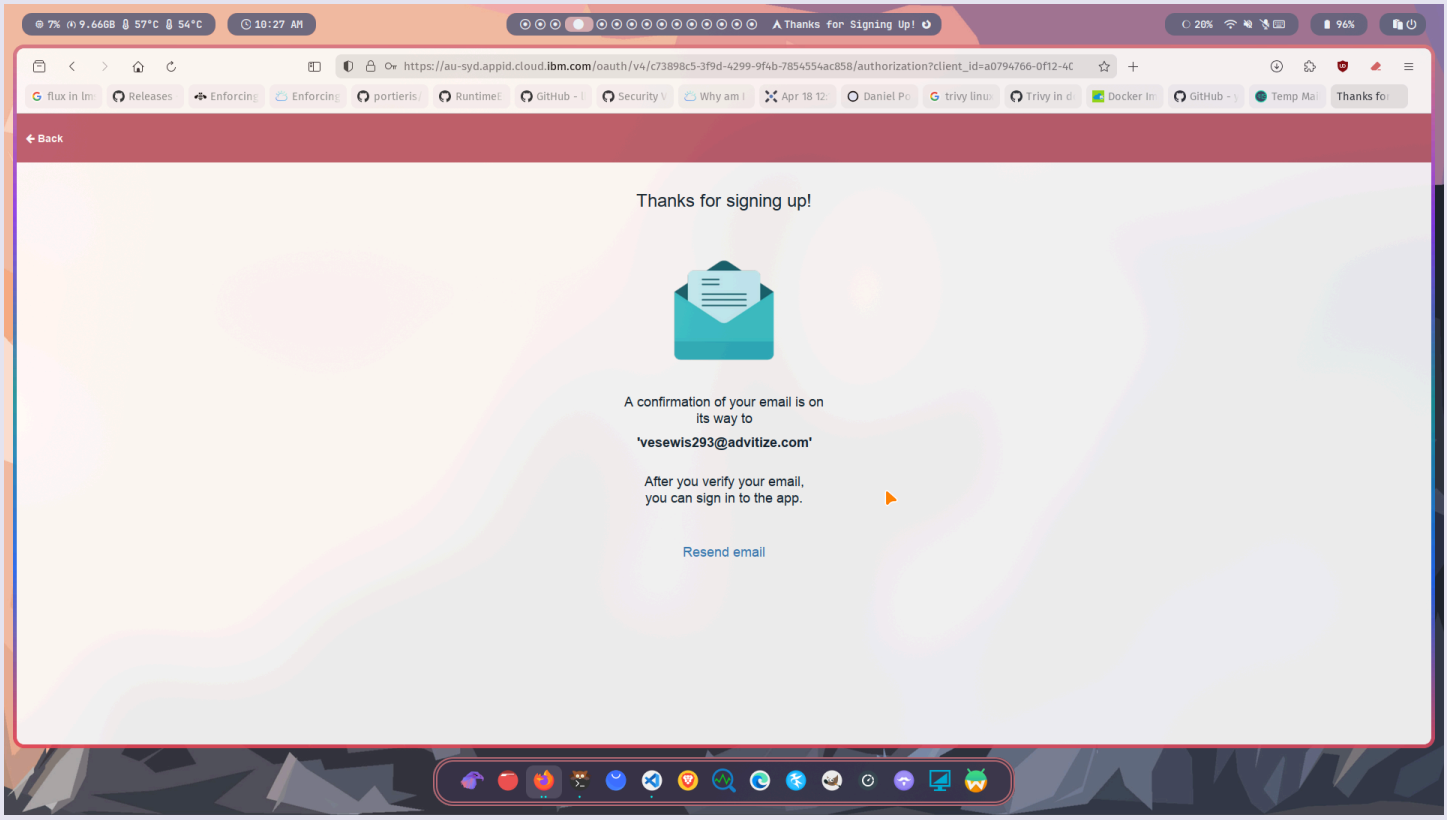

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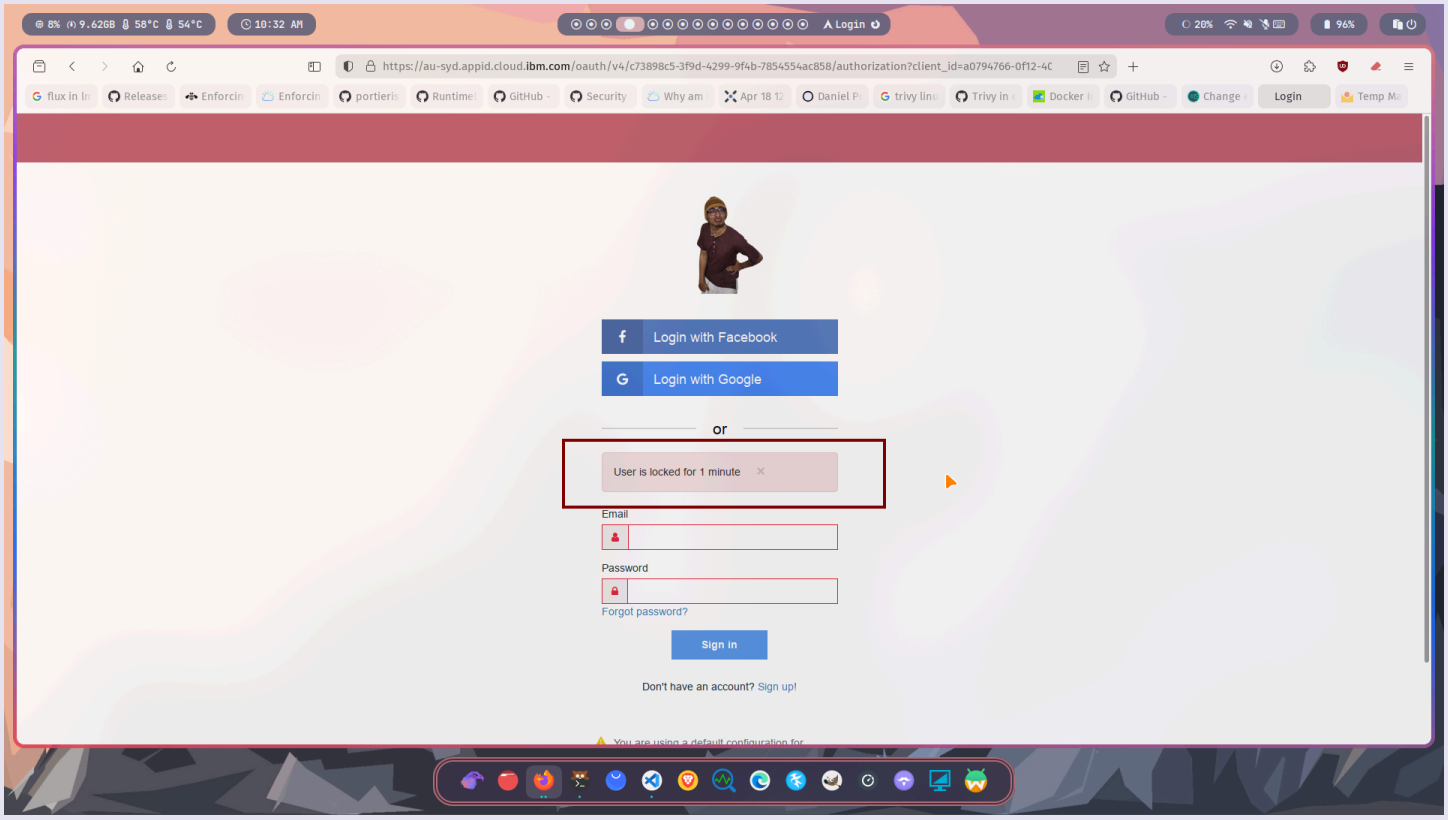
b) User will be locked if repeatedly presses same password which is wrong



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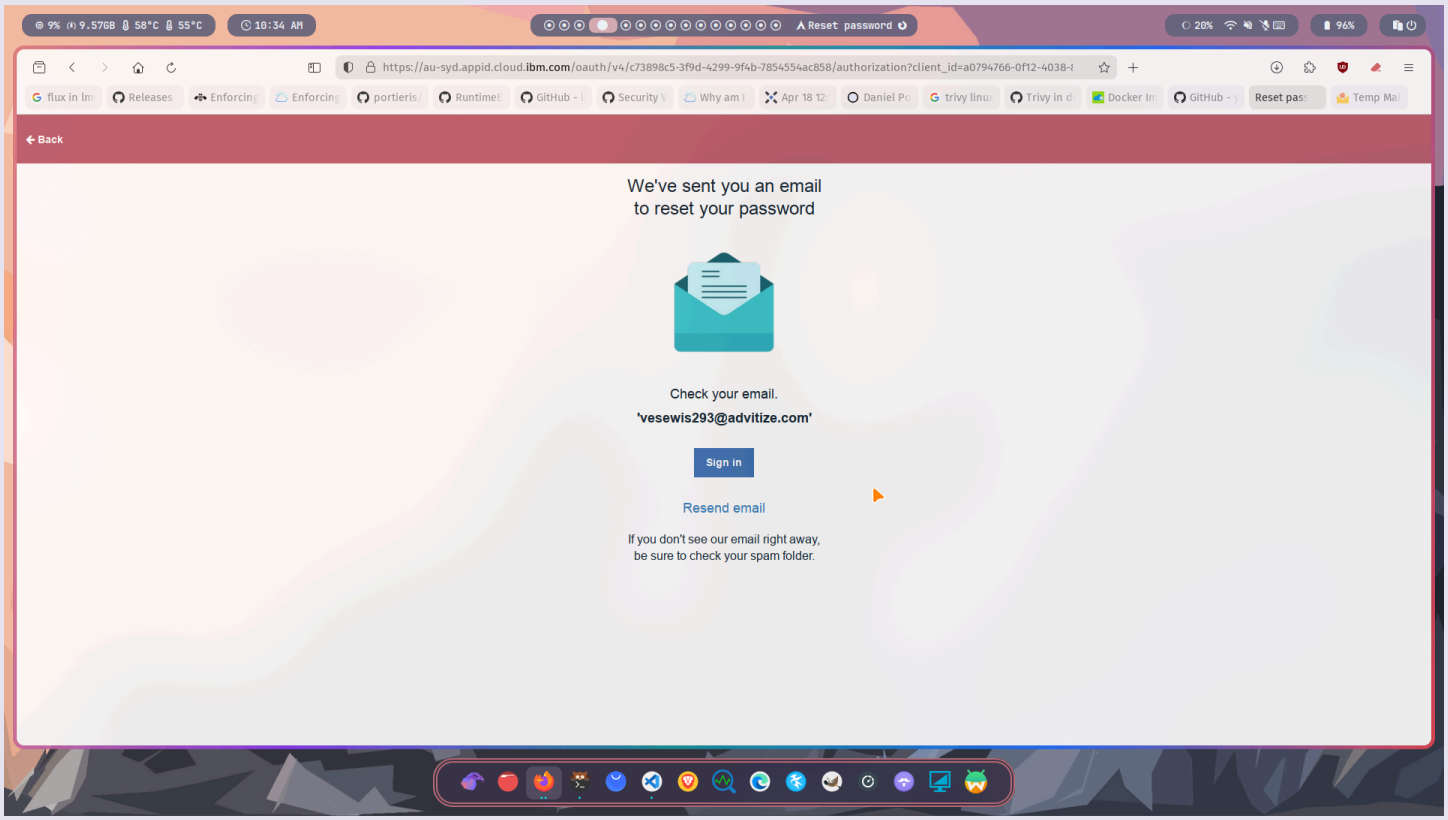
c) Resetting password is permitted once but not twice till minimum duration (here 1 hour)



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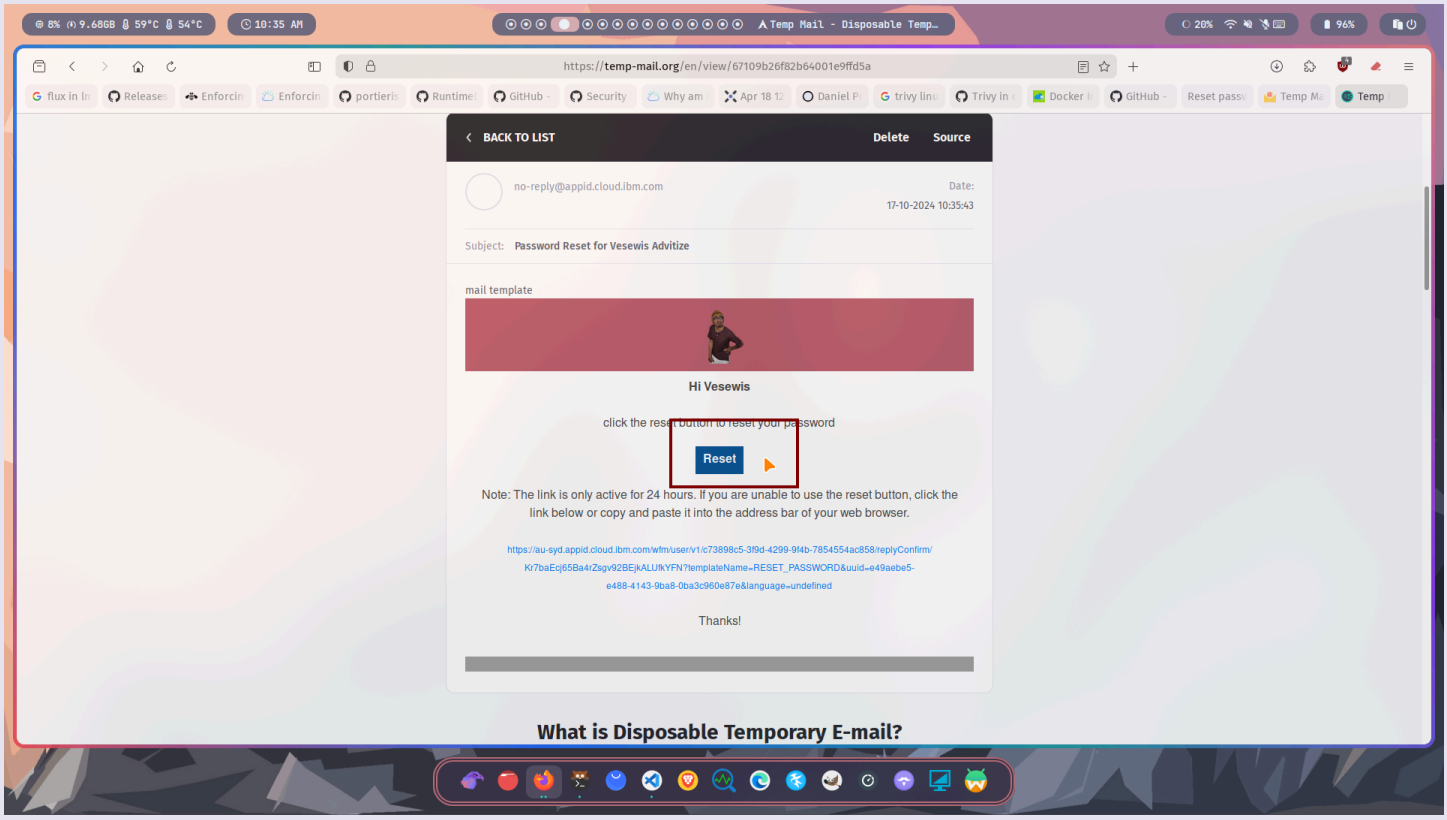

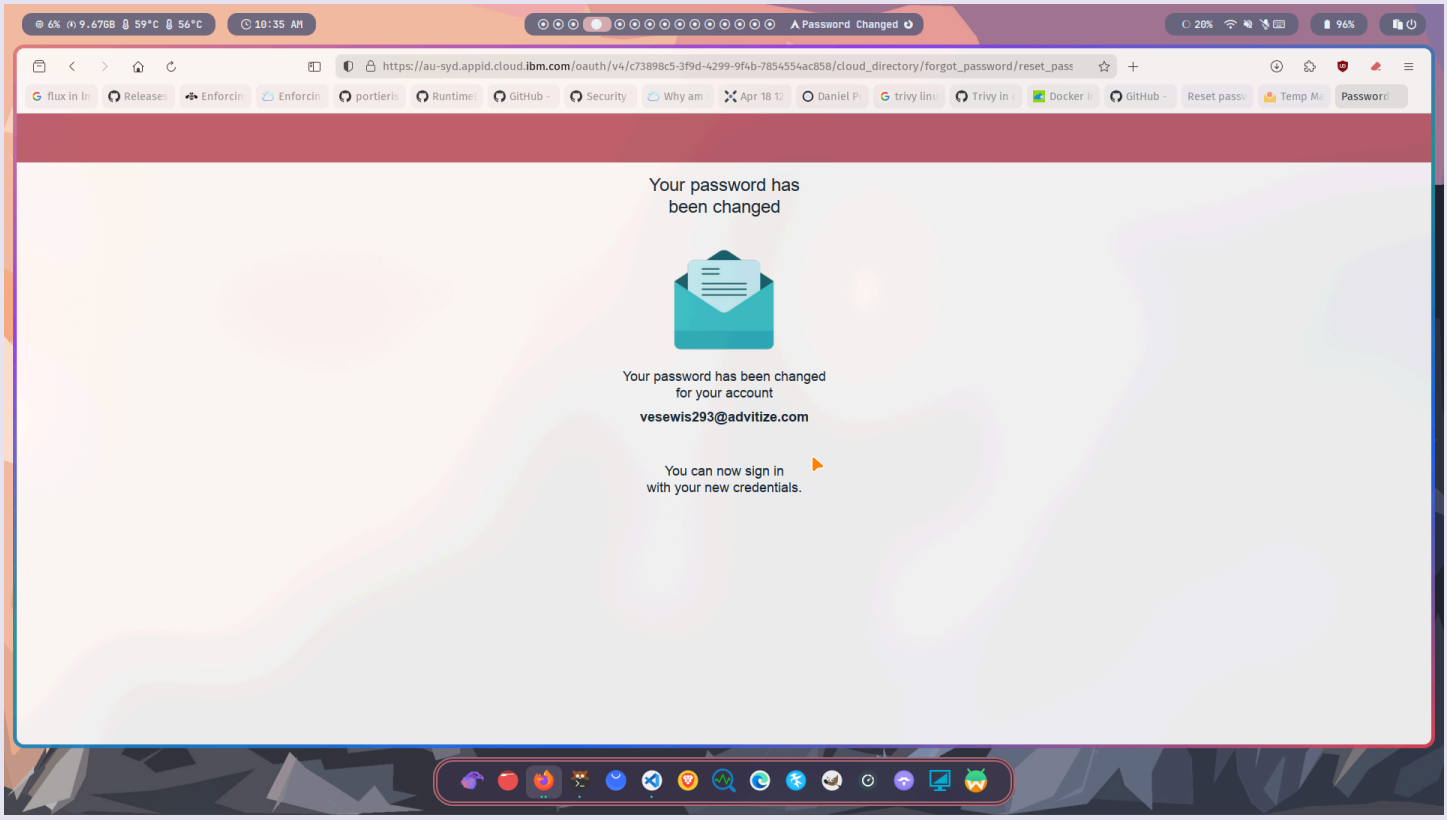

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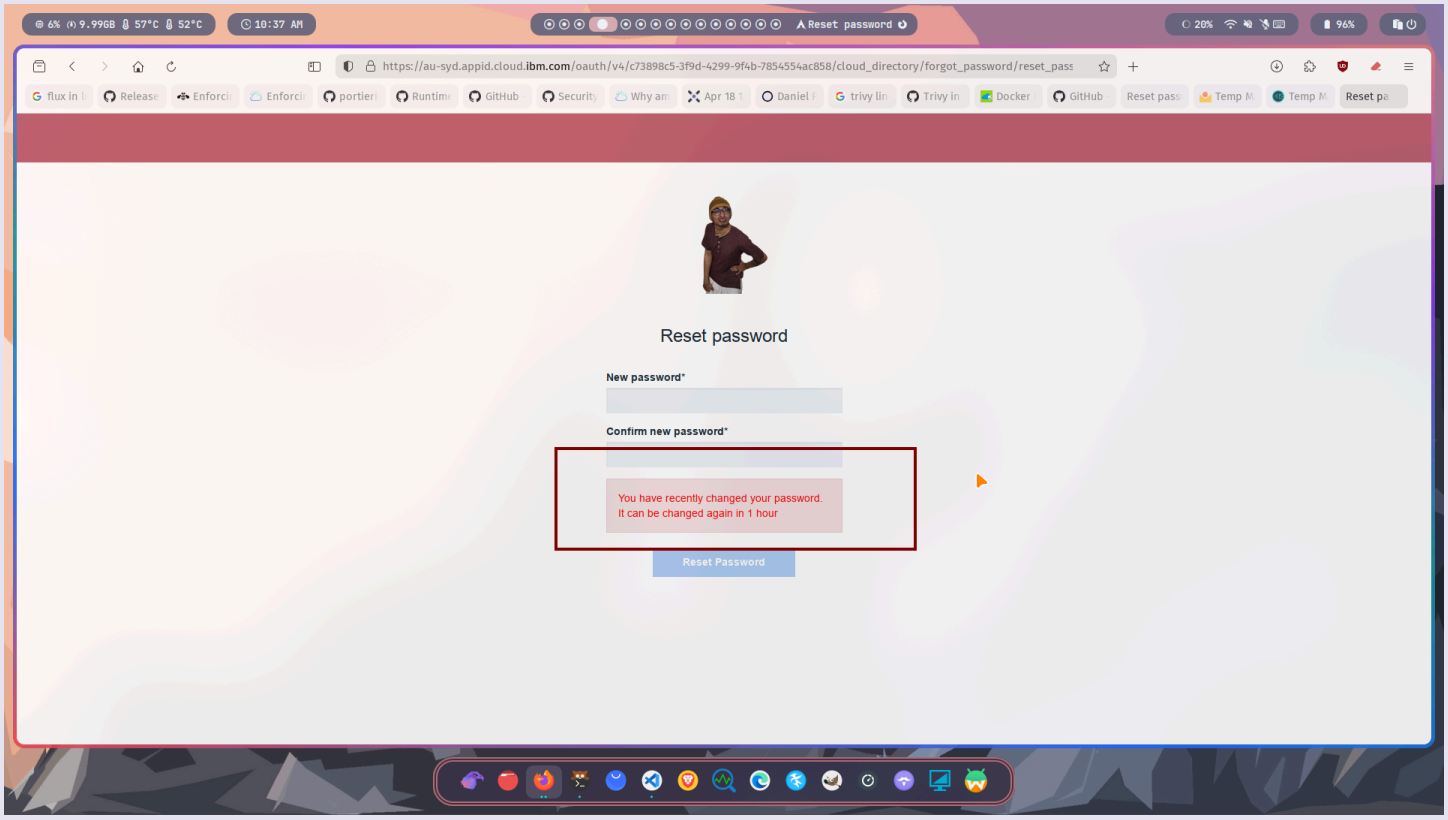
(2nd time)