

# React Class Material: Validating Forms & Debugging Issues

## Session 1: Validating User Input (45 min)

Goal: Learn how to validate form input using simple logic in React.

### PART 1: What is Validation? (15 min)

- Ensures user inputs correct data.
- Happens during onChange or onSubmit.
- Can be done manually or with libraries.

Example:

```
function LoginForm() {  
  const [email, setEmail] = useState("");  
  const [password, setPassword] = useState("");  
  const [error, setError] = useState("");  
  
  const handleSubmit = (e) => {  
    e.preventDefault();  
    if (!email.includes("@")) {  
      setError("Invalid email.");  
      return;  
    }  
    if (password.length < 6) {  
      setError("Password too short.");  
      return;  
    }  
    setError("");  
    alert("Success!");  
  };  
  
  return (  
    <form onSubmit={handleSubmit}>  
      <input value={email} onChange={(e) => setEmail(e.target.value)} placeholder="Email" />  
      <input value={password} onChange={(e) => setPassword(e.target.value)} type="password"  
        placeholder="Password" />  
    </form>  
  );  
}
```

```
    {error && <p style={{ color: "red" }}>{error}</p>}  
    <button type="submit">Login</button>  
  </form>  
);  
}
```

## PART 2: Student Tasks (30 min)

1. Create a registration form with:
  - First Name, Last Name, Email, Password
2. Validate:
  - No empty fields
  - Email includes @
  - Password has at least 6 characters
3. Show custom error messages under each input

## Session 2: Debugging Form-related Issues (45 min)

Goal: Understand how to debug forms in React.

### PART 1: Common Issues (15 min)

1. State not updating missing onChange or incorrect value binding
2. Page refresh missing e.preventDefault()
3. Typo in setState or function names
4. Validation logic not executing

### PART 2: Debugging Techniques (15 min)

- Use console.log to trace values
- Use browser console to check errors
- Use React DevTools to inspect state/props
- Test each input independently

### PART 3: Student Debugging Task (15 min)

1. Fix a broken form given by instructor (intentional errors)
2. Explain what was wrong and how it was fixed
3. Identify why error message wasn't showing and fix it