TOPS TECHNOLOGIES

TRAINING OUTSOURCING PLACEMENTS

React JS

Web Application Development

- In todays world every industry has own web application , through they are handling and managing the business.

- The Web application development can be any programming like – Node, PHP , Java , .Net, etc.

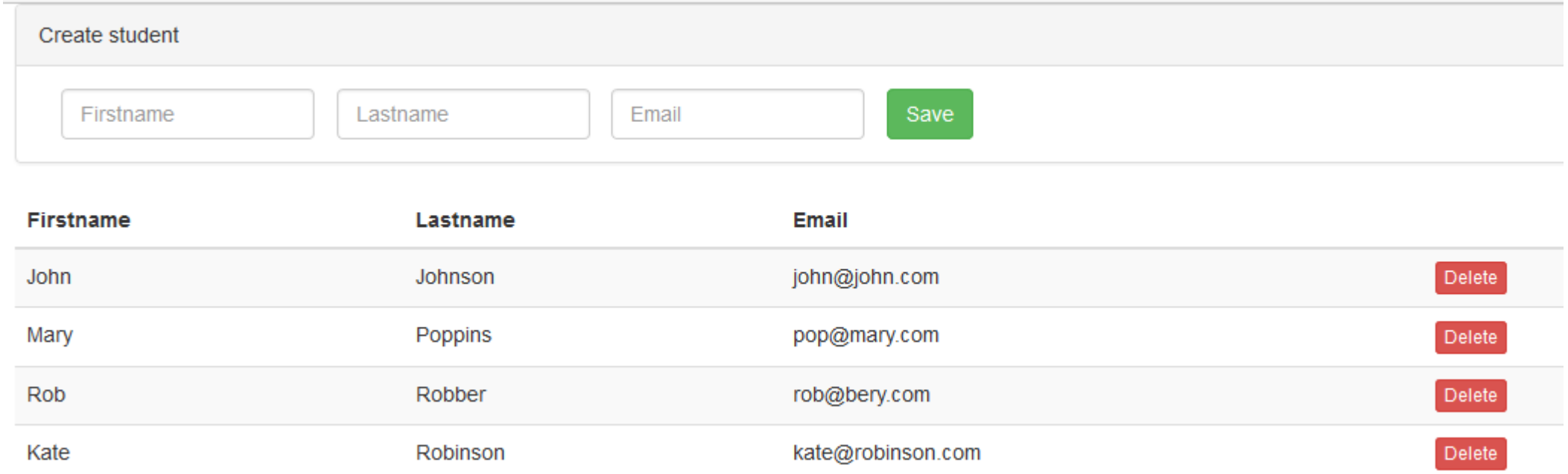
- For the database backend there are many database available like – SQL Server, Oracle, MySql, etc.

Front End

Front-end web development is the practice of converting data to a graphical interface, through the use of HTML, CSS, and JavaScript.

So that users can view and interact with that data

Back End


Create student
Firstname
Lastname
Email
Save
Firstname
Lastname
Email
John
Johnson
john@john.com
Delete
Mary
Poppins
pop@mary.com
Delete
Rob
Robber
rob@bery.com
Delete
Kate
Robinson
kate@robinson.com
Delete

JS Introduction

Javascript id one of 3 languages all web developers must learn :

1. **HTML** to define the content of web pages
2. **CSS** to specify the layout of web pages
3. **JavaScript** to program the behavior of web pages

- Javascript is also used for Desktop and Server programs.
- Some databases like MongoDB and CouchDB also use JavaScript
- JavaScript was invented by Brendan Eich in 1995, and became an ECMA standard in 1997.
- ECMAScript is the official name of the language

What is ECMAScript 6?

ECMAScript 6 is also known as ES6 and ECMAScript 2015 and Javascript 6

ES6 introduce some new features as below :

- Javascript **let** : allows you to declare variable with block scope
- Javascript **const :** value can not be changed
- Javascript **Arrow functions** : var multiply= (x,y) => x*y;
- **Javascript Classes :** class keyword
- **Default Parameters** : function myPower(x, y=2)
- Exponentiation Operators : x**2

What is React ?

React, also known as ReactJS or React.js, is a JavaScript library for creating UI.

Originally developed for Facebook

It is maintained by Facebook and a community of individual developers and companies.

React can be used as a base in the development **of single-page or mobile applications**

React is a JavaScript library - one of the most popular ones, with **over 100,000 stars on GitHub**.

declarative, meaning that is renders components immediately according to your input so that you can see what you're coding instantly;

component-based, allowing you to build self-managing components that you can use across your app;

flexible, allowing you to develop features and change the app without having to rewrite what you've already created.

What is React native?

React Native uses React to build native apps.

Instead of web components, it uses native Android and iOS components, allowing you to create mobile UIs with declarative components.

Basically, React Native works the same way as React, but instead of the Virtual DOM it uses native views to manipulate the DOM.

React Native relies fully on JavaScript and uses Bridge to connect with the native platform.

Why use React

Fast Learning Curve : only deals with view layer

Reusable Components : Component based structure

Fast render with Virtual DOM : a DOM kept in memory

Clean abstraction : nothing like MVC or MVVM

Great developer Tools : React Developer Tool Chrome Extension

React Native : Android and iOS application

Who uses React?

https://reactnative.dev/showcase.html

Setting up dev. environment

Install node.js for npm

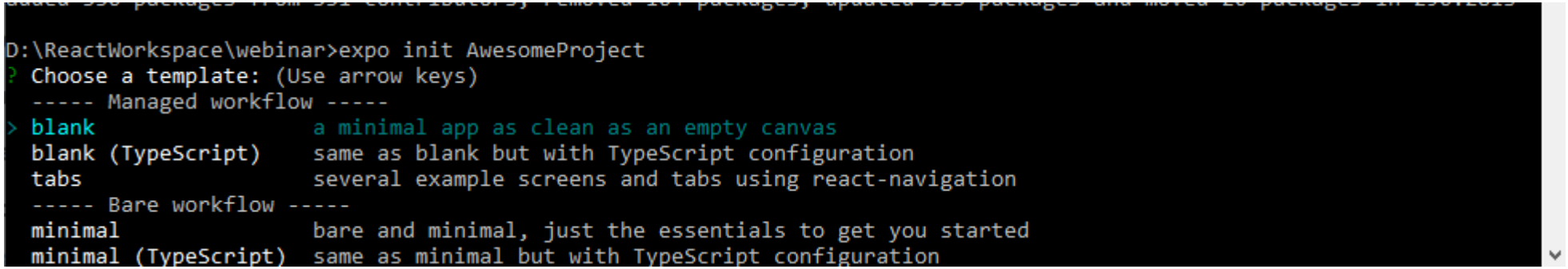
If you are new mobile developer： EXPO CLI quickstart

If you are already familiar with mobile development： you may use React Native CLI

Expo init awesome project

Managed Workflow - you only write JavaScript / TypeScript and Expo tools and services take care of the rest for you

Bare Workflow - you have full control over every aspect of the native project, and Expo tools can't help quite as much.



Components

Components are self-contained reusable building blocks

React components implement a render() method that takes input data and returns what to display

Each component must define render() function which return some JSX to render in react

Function components

```
function Welcome(props) {
  return <h1>Hello, {props.name}</h1>;
}
```

Class components

```
class Welcome extends React.Component {
  render() {
    return <h1>Hello, {this.props.name}</h1>;
  }
}
```

Create React App - with no configuration

Static HTML page and rendering the React and Babel is not very efficient, and is hard to maintain

Install **Node >= 8.10**

```
npx create-react-app my-app
cd my-app
npm start
```

Create react app using npx

```
yarn create react-app my-app
```

Yarn is faster than npm and has more features than npm

Why JSX?

JSX is a preprocessor step that adds XML syntax to JavaScript

You can definitely use React without JSX but JSX makes React a lot more elegant.

Just like XML, JSX tags have a tag name, attributes, and children.

If an attribute value is enclosed in quotes, the value is a string.

Otherwise, wrap the value in braces and the value is the enclosed JavaScript expression.

JSX Syntax

Variable Declaration	const element = Hello, World!!
Embedding Expression	const name='Tops Technology' const element= Hello, {name}

Embed Result of Function	function formatName(user) {
	  return user.firstName + ' ' + user.lastName;
	}
	
	const user = { firstName: 'Harper', lastName: 'Perez' };
	
	const element = Hello, {formatName(user)}! ;

JSX as expression (inside if or for)	function getGreeting(user) {
	  if (user) {
	  return Hello, {formatName(user)}! ;
	  }
	  return Hello, Stranger. ;
	}

Props

Props are like parameters through which we can customize our components

For example to display image we can have source as props which can help to decide which image to display

Props are fixed throughout lifetime of component

Props is set by parent

```
function Clock(props) {
  return (
    <div>
      <h1>Hello, world!</h1>
      <h2>It is {props.date.toLocaleTimeString()}.</h2>
    </div>
  );
}

function tick() {
  ReactDOM.render(
    <Clock date={new Date()} />,
    document.getElementById('root')
  );
}

setInterval(tick, 1000);
```

State

Data that is going to change we use state

Generally we initialize state in constructor and then call **setState** when we want to change it

```
class Clock extends React.Component {
  constructor(props) {
    super(props);
    this.state = {date: new Date()};
  }

  render() {
    return (
      <div>
        <h1>Hello, world!</h1>
        <h2>It is {this.state.date.toLocaleTimeString()}.</h2>
      </div>
    );
  }
}
```

React Example

Calculator

Shopping Cart

Game

Product Compare

Builder Book

React Rocks

React Prerequisites

Basic familiarity with **HTML & CSS**.

Basic knowledge of **JavaScript** and programming.

Basic understanding of **the DOM**.

Familiarity with **ES6 syntax and features**.

Node.js and npm installed globally.

Our Role in Your **Career**

WHAT TOPS PROVIDE YOU..!

What TOPS Offers

- **Guaranteed Placements** after Graduation with MNC's as well as Companies across India with higher salary packages
- Live Projects experience
- Industry Certification
- Certified instructors
- Project with complete SDLC
- Exposure and experience on Industry used tools

LIVE Project work Experience

Industry accepted Certification

Certified Instructors

TOPS TECHNOLOGIES
TRAINING OUTSOURCING PLACEMENTS

Exposure to industry level tools

Projects on complete SDLC

Java
TOPS TECHNOLOGIES

Working on Projects

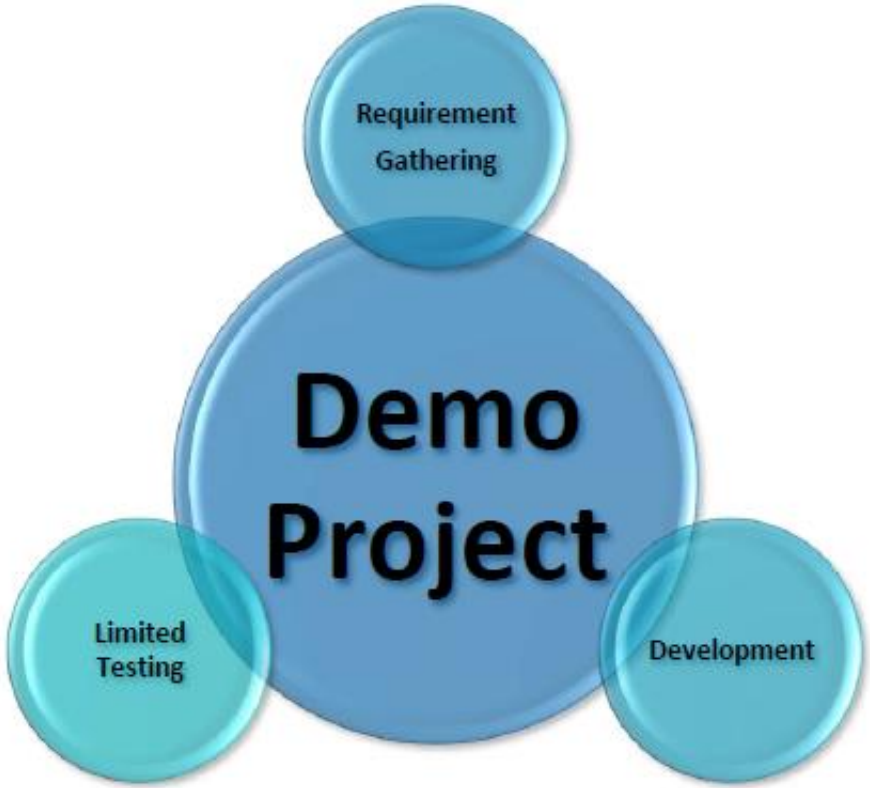
Live Project

- Requirements from Clients
- Formal understanding of requirements – Project scope
- Design of application (layout) and its approval from client
- Development Process Begins by using an existing framework or library
- Testing internally by Testing process
- UAT
- Deployment
- Maintenance

Demo Project

- Requirements gathering
- Designing and Development done parallel.
- Limited Testing

Working on Projects



Our Shortlisted Students

Java

TOPS TECHNOLOGIES
TRAINING OUTSOURCING PLACEMENTS

Queries ??

Thank You ☺

TOPS TECHNOLOGIES

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