**CS-213: Advanced Programming**

**Class: BSCS 7A**

# Lab 11: React Native Calculator Application

**Date: 05 December, 2019**

**Time: 10:00-01:00pm & 02:00-05:00pm**

**Submitted by: Ismail Matteh 210820**

# Instructor: Dr. Sidra Sultana

**Lab Engineer: Ms. Ayesha Asif**

# 

# Lab 11: React Native Calculator Application

**Lab Task**

Create a basic calculator app in react native

|  |
| --- |
| **Solution** |
| **Task Code:**  **App.js:**  import React, { Component } from 'react';  import {  View,  Text  } from 'react-native';  import Style from './Style';  import InputButton from './InputButton';  *// Define the input buttons that will be displayed in the calculator.*  const inputButtons = [  ['CLR'],  [9, 8, 7, '+'],  [6, 5, 4, '-'],  [3, 2, 1, '\*'],  [0, '.', '/', '=']  ];  export default class App extends Component {  constructor(props) {  super(props);  this.initialState = {  previousInputValue: 0,  inputValue: 0,  selectedSymbol: null  };  this.state = this.initialState;  }  render() {  return (  <View style={Style.rootContainer}>  <View style={Style.displayContainer}>  <Text style={Style.displayText}>{this.state.inputValue}</Text>  </View>  <View style={Style.inputContainer}>  {this.\_renderInputButtons()}  </View>  </View>  );  }  \_renderInputButtons() {  let views = inputButtons.map((row, idx) => {  let inputRow = row.map((buttonVal, columnIdx) => {  return <InputButton  value={buttonVal}  highlight={this.state.selectedSymbol === buttonVal}  onPress={this.\_onInputButtonPressed.bind(this, buttonVal)}  key={'butt-' + columnIdx} />;  });  return <View style={Style.inputRow} key={'row-' + idx}>{inputRow}</View>;  });  return views;  }  \_onInputButtonPressed(input) {  switch (typeof input) {  case 'number':  return this.\_handleNumberInput(input);  default:  return this.\_handleStringInput(input);  }  }  \_handleNumberInput(num) {  let inputValue = (this.state.inputValue \* 10) + num;  this.setState({  inputValue: inputValue  });  }  \_handleStringInput(str) {  switch (str) {  case '/':  case '\*':  case '+':  case '-':  this.setState({  selectedSymbol: str,  previousInputValue: this.state.inputValue,  inputValue: 0  });  break;  case '=':  let symbol = this.state.selectedSymbol,  inputValue = this.state.inputValue,  previousInputValue = this.state.previousInputValue;  if (!symbol) {  return;  }  this.setState({  previousInputValue: 0,  inputValue: eval(previousInputValue + symbol + inputValue),  selectedSymbol: null  });  break;  case 'CLR':  this.setState({inputValue: 0});  break;  }  }  **}**  **InputButton.js:**  import React, { Component } from 'react';  import {  TouchableHighlight,  Text  } from 'react-native';  import Style from './Style';  export default class InputButton extends Component {  render() {  return (  <TouchableHighlight style={[Style.inputButton, this.props.highlight ? Style.inputButtonHighlighted : null]}  underlayColor="#193441"  onPress={this.props.onPress}>  <Text style={Style.inputButtonText}>{this.props.value}</Text>  </TouchableHighlight>  )  }  }  **Style.js:**  import { StyleSheet } from 'react-native';  var Style = StyleSheet.create({  rootContainer: {  flex: 1  },  displayContainer: {  flex: 2,  backgroundColor: 'grey',  justifyContent: 'center'  },  displayText: {  color: 'black',  fontSize: 36,  textAlign: 'left',  padding: 20  },  inputContainer: {  flex: 6,  backgroundColor: 'black'  },  inputButton: {  flex: 1,  alignItems: 'center',  justifyContent: 'center',  borderWidth: 1,  borderColor: 'white'  },  inputButtonHighlighted: {  backgroundColor: '#4f4c4c'  },  inputButtonText: {  fontSize: 24,  color: 'black'  },  inputRow: {  flex: 1,  flexDirection: 'row'  }  });  export default Style;  **Task Output Screenshot:** |