

Báo cáo bài tập về nhà ngày 28/10/2025

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## BT1: Lập trình ứng dụng Calculator đơn giản

#### 1. Demo thực hiện các phép tính với số nguyên đơn giản

2. Demo chức năng nút BS: Xóa chữ số hàng đơn vị của toán hạng hiện tại.

The screenshot shows the Android Studio interface with the following details:

- Project Structure:** The project is named "MyViewApplication". The file "MainActivity.kt" is open, showing Java code for handling button clicks and updating a display value.
- Code Snippet (MainActivity.kt):**

```
11    class MainActivity : AppCompatActivity() {
12        private fun backspace() {
13            if (displayValue.length > 0) {
14                displayValue = displayValue.dropLast(1)
15                if(displayValue == "") {
16                    displayValue = "0"
17                }
18                isDecimality = true
19            } else {
20                displayValue = "0"
21                isDecimality = true
22            }
23            updateDisplay()
24        }
25
26        private fun onPlusMinusClick() {
27            if (displayValue == "Error") return
28
29            if (displayValue == "+") {
30                return
31            }
32
33            if(displayValue.startsWith(prefix = "-")) {
34                displayValue = displayValue.substring(startIndex = 1)
35            } else {
36                displayValue = "-$displayValue"
37            }
38
39            if (isDecimality) {
40                operand1 = displayValue.toIntOrNull()
41            }
42            updateDisplay()
43        }
44    }
```

- Emulator:** A Pixel S API 36.0 emulator is running, showing a digital calculator interface. The screen displays the number "30 +". Below the display are four buttons: CE, C, BS, and /. Further down are numeric buttons (1-9, 0), arithmetic operators (+, -, ×, ÷), and a decimal point (.). The bottom right corner shows a small "13" icon.
- Bottom Bar:** The bottom navigation bar includes icons for File, Project, Errors, Problems, and Help.
- Status Bar:** The status bar shows the current file path: "MyViewApplication > src > main > java > com.example > myviewapplication > MainActivity.kt" and the text "File 3 Project Errors".
- Bottom Right:** A message box indicates "DE project settings can be added to IDE".

```

class MainActivity : AppCompatActivity(), View.OnClickListener {
    private fun backspace() {
        if (displayValue.length > 1) {
            displayValue = displayValue.dropLast(1)
            if(displayValue == "") {
                displayValue += "0"
                isNewEntry = true
            }
        } else {
            displayValue = "0"
            isNewEntry = true
        }
        updateDisplay()
    }

    private fun onPlusMinusClick() {
        if (displayValue == "Error") return
        if (displayValue == "0") {
            return
        }
        if (displayValue.startsWith(prefix = "-")) {
            displayValue = displayValue.substring(startIndex = 1)
        } else {
            displayValue = "-$displayValue"
        }
        if (isNewEntry) {
            operand1 = displayValue.toIntOrNull()
        }
        updateDisplay()
    }
}

```

```

class MainActivity : AppCompatActivity(), View.OnClickListener {
    private fun backspace() {
        if (displayValue.length > 1) {
            displayValue = displayValue.dropLast(1)
            if(displayValue == "") {
                displayValue += "0"
                isNewEntry = true
            }
        } else {
            displayValue = "0"
            isNewEntry = true
        }
        updateDisplay()
    }

    private fun onPlusMinusClick() {
        if (displayValue == "Error") return
        if (displayValue == "0") {
            return
        }
        if (displayValue.startsWith(prefix = "-")) {
            displayValue = displayValue.substring(startIndex = 1)
        } else {
            displayValue = "-$displayValue"
        }
        if (isNewEntry) {
            operand1 = displayValue.toIntOrNull()
        }
        updateDisplay()
    }
}

```

### 3. Demo chức năng nút CE: Xóa giá trị toán hạng hiện tại về 0

```

class MainActivity : AppCompatActivity(), View.OnClickListener {
    private fun backspace() {
        if (displayValue.length > 1) {
            displayValue = displayValue.dropLast(1)
            if(displayValue == "") {
                displayValue += "0"
                isNewEntry = true
            }
        } else {
            displayValue = "0"
            isNewEntry = true
        }
        updateDisplay()
    }

    private fun onPlusMinusClick() {
        if (displayValue == "Error") return
        if (displayValue == "0") {
            return
        }
        if (displayValue.startsWith(prefix = "-")) {
            displayValue = displayValue.substring(startIndex = 1)
        } else {
            displayValue = "-$displayValue"
        }
        if (isNewEntry) {
            operand1 = displayValue.toIntOrNull()
        }
        updateDisplay()
    }
}

```

The screenshot shows the Android Studio interface with the project 'MyViewApplication' open. The code editor displays `MainActivity.kt` containing Java code for a calculator application. The phone preview shows a digital calculator with the display showing '15 + 12'. The calculator has a numeric keypad from 0 to 9, a decimal point, and operators (+, -, ×, ÷). The bottom row includes a clear button (CE), a decimal button (C), a backspace button (BS), and an equals button (/).

```

class MainActivity : AppCompatActivity(), View.OnClickListener {
    private fun backspace() {
        if(displayValue == "-") {
            displayValue = "0"
            isNeedEntry = true
        } else if(displayValue == ".") {
            displayValue = "0."
            isNeedEntry = true
        } else {
            displayValue = displayValue.substring(0, displayValue.length - 1)
            updateDisplay()
        }
    }

    private fun onPlusMinusClick() {
        if(displayValue == "Error") return
        if(displayValue == "0") {
            return
        }
        if(displayValue == "-") {
            displayValue = displayValue.substring(0, displayValue.length - 1)
        } else if(displayValue == ".") {
            displayValue = displayValue.substring(0, displayValue.length - 1) + "-"
        }
        updateDisplay()
    }

    private fun updateDisplay() {
        displayText.setText(displayValue)
    }
}

```

This screenshot is identical to the one above, showing the same code in `MainActivity.kt` and the same calculator application running on a smartphone.

```

class MainActivity : AppCompatActivity(), View.OnClickListener {
    private fun backspace() {
        if(displayValue == "-") {
            displayValue = "0"
            isNeedEntry = true
        } else if(displayValue == ".") {
            displayValue = "0."
            isNeedEntry = true
        } else {
            displayValue = displayValue.substring(0, displayValue.length - 1)
            updateDisplay()
        }
    }

    private fun onPlusMinusClick() {
        if(displayValue == "Error") return
        if(displayValue == "0") {
            return
        }
        if(displayValue == "-") {
            displayValue = displayValue.substring(0, displayValue.length - 1)
        } else if(displayValue == ".") {
            displayValue = displayValue.substring(0, displayValue.length - 1) + "-"
        }
        updateDisplay()
    }

    private fun updateDisplay() {
        displayText.setText(displayValue)
    }
}

```

#### 4. Demo chức năng nút C: Xóa phép toán, nhập lại phép toán từ đầu.

This screenshot shows the code in `MainActivity.kt` with a modification: the `onPlusMinusClick()` method has been removed. The phone preview shows the calculator application with the display showing '0'. The numeric keypad and operators remain visible.

```

class MainActivity : AppCompatActivity(), View.OnClickListener {
    private fun backspace() {
        if(displayValue.length > 0) {
            displayValue = displayValue.substring(0, displayValue.length - 1)
            isNeedEntry = true
        } else {
            displayValue = "0"
            isNeedEntry = true
        }
        updateDisplay()
    }

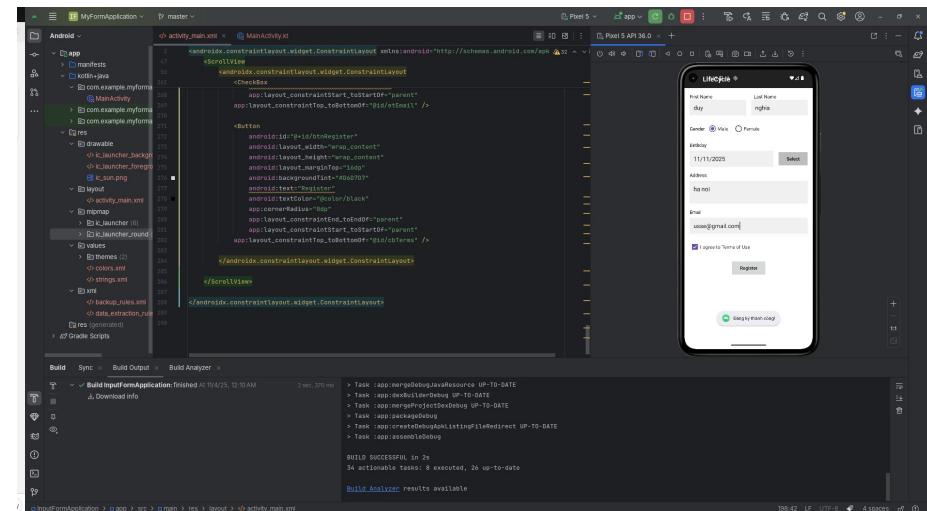
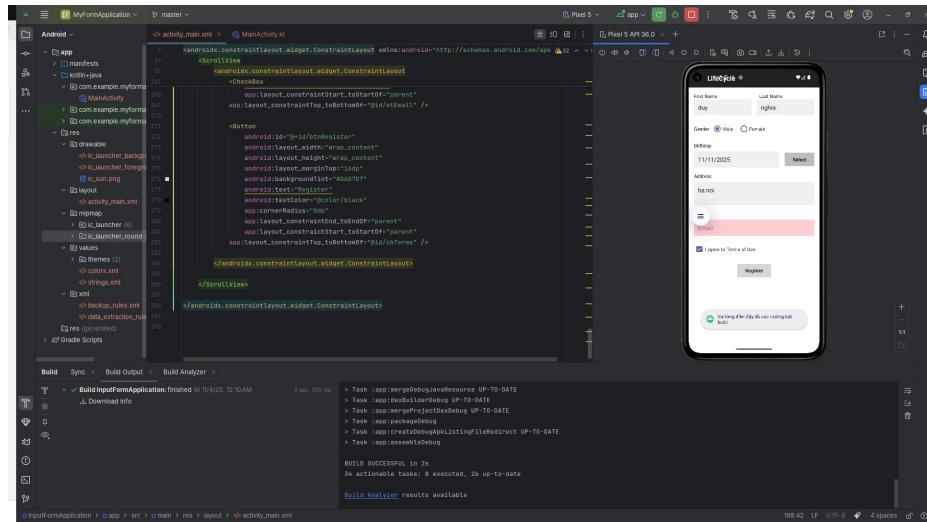
    private fun onPlusMinusClick() {
        if(displayValue == "Error") return
        if(displayValue == "0") {
            return
        }
        if(displayValue.startsWith("-")) {
            displayValue = displayValue.substring(0, displayValue.length - 1)
        } else if(displayValue == ".") {
            displayValue = displayValue.substring(0, displayValue.length - 1) + "-"
        }
        updateDisplay()
    }

    private fun updateDisplay() {
        displayText.setText(displayValue)
    }
}

```

## BT2: Lập trình ứng dụng nhập dữ liệu

### 1. Demo nhập thiếu trường



### 2. Demo hiển thị form sinh nhật

