Hands-on Activity 6.1	
Functions	
Course Code: CPE 007	**Program:** Computer Engineering
Course Title: Programming Logic and Design	**Date Performed: 10/21/2025**
Section: CPE11S1	**Date Submitted: 10/21/2025**
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6. Output

CODE:

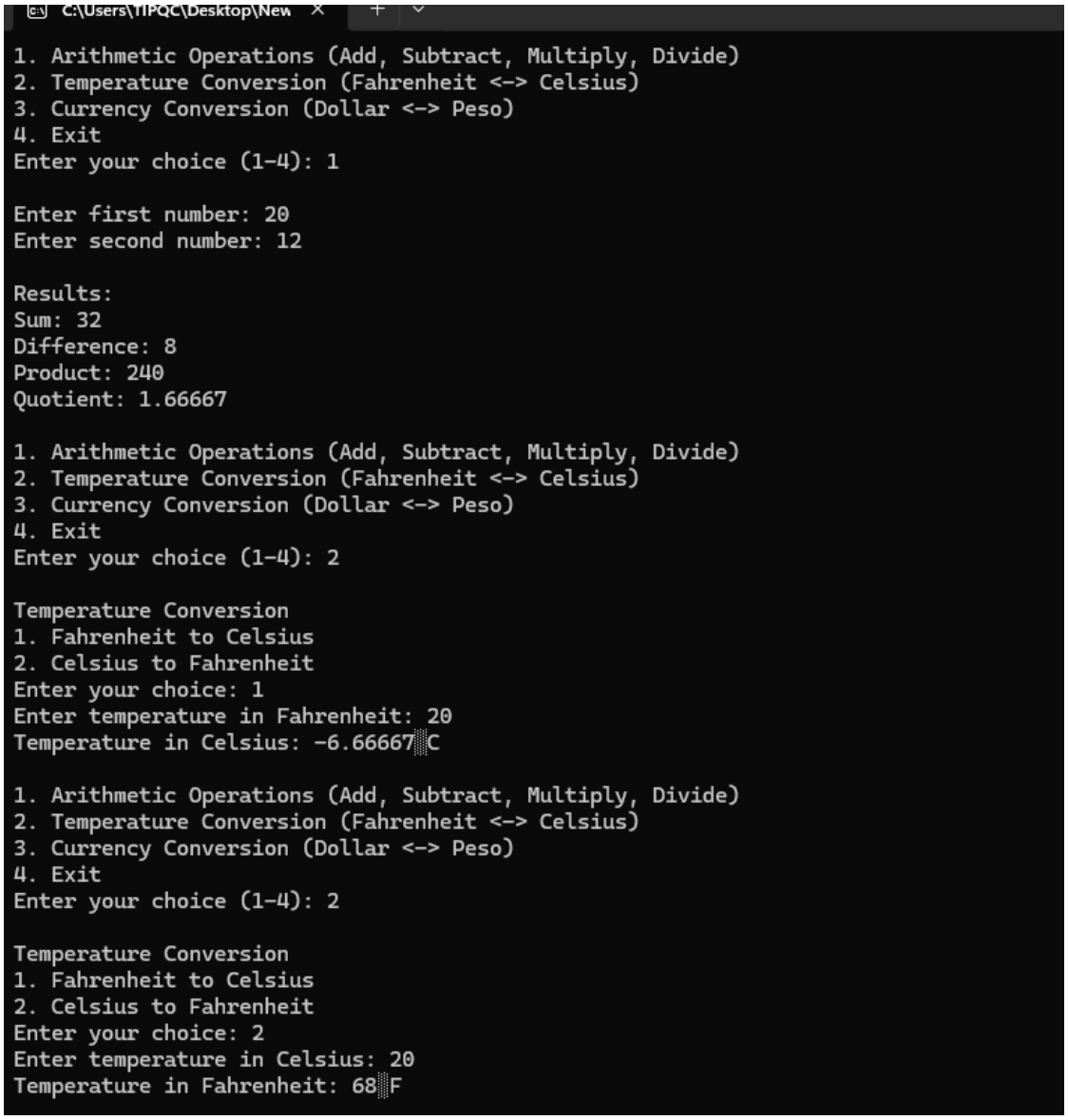
cenar_functions.cpp

```cpp
#include <iostream>
using namespace std;


void arithmeticOperations();
void temperatureConversion();
void currencyConversion();

int main() {
    int choice;

    do {
        cout << "1. Arithmetic Operations (Add, Subtract, Multiply, Divide)" <<
        cout << "2. Temperature Conversion (Fahrenheit <-> Celsius)" << endl;
        cout << "3. Currency Conversion (Dollar <-> Peso)" << endl;
        cout << "4. Exit" << endl;
        cout << "Enter your choice (1-4): ";
        cin >> choice;

        switch (choice) {
            case 1:
                arithmeticOperations();
                break;
            case 2:
                temperatureConversion();
                break;
            case 3:
                currencyConversion();
                break;
            case 4:
                cout << "Exiting Program" << endl;
            default:
                cout << "Invalid choice\n";
        }
        cout << endl;
    } while (choice != 4);

    return 0;
}

//Arithmetic Operations
void arithmeticOperations() {
    int a, b;
    cout << "\nEnter first number: ";
    cin >> a;
    cout << "Enter second number: ";
    cin >> b;

    cout << "\nResults:" << endl;
    cout << "Sum: " << a + b << endl;
    cout << "Difference: " << a - b << endl;
    cout << "Product: " << a * b << endl;
    if (b != 0)
        cout << "Quotient: " << (float)a / b << endl;
    else
        cout << "Division: Cannot divide by zero" << endl;
}
```

cenar_functions.cpp

```cpp
}


//Temperature Conversion
void temperatureConversion() {
    int choice;
    double temp, converted;

    cout << "\nTemperature Conversion" << endl;
    cout << "1. Fahrenheit to Celsius" << endl;
    cout << "2. Celsius to Fahrenheit" << endl;
    cout << "Enter your choice: ";
    cin >> choice;

    if (choice == 1) {
        cout << "Enter temperature in Fahrenheit: ";
        cin >> temp;
        converted = (temp - 32) * 5 / 9;
        cout << "Temperature in Celsius: " << converted << "°C" << endl;
    } else if (choice == 2) {
        cout << "Enter temperature in Celsius: ";
        cin >> temp;
        converted = (temp * 9 / 5) + 32;
        cout << "Temperature in Fahrenheit: " << converted << "°F" << endl;
    } else {
        cout << "Invalid number" << endl;
    }
}

//Currency Conversion
void currencyConversion() {
    int choice;
    double amount, converted;
    const double rate = 58.5;

    cout << "\nCurrency Conversion" << endl;
    cout << "1. Dollar to Peso" << endl;
    cout << "2. Peso to Dollar" << endl;
    cout << "Enter your choice: ";
    cin >> choice;

    if (choice == 1) {
        cout << "Enter amount in Dollars: $";
        cin >> amount;
        converted = amount * rate;
        cout << "Equivalent in Pesos: ?" << converted << endl;
    } else if (choice == 2) {
        cout << "Enter amount in Pesos: ?";
        cin >> amount;
        converted = amount / rate;
        cout << "Equivalent in Dollars: $" << converted << endl;
    } else {
        cout << "Invalid number" << endl;
    }
}

```

OUTPUT:


C:\Users\ITPQC\Desktop\New
1. Arithmetic Operations (Add, Subtract, Multiply, Divide)
2. Temperature Conversion (Fahrenheit <-> Celsius)
3. Currency Conversion (Dollar <-> Peso)
4. Exit
Enter your choice (1-4): 1
Enter first number: 20
Enter second number: 12
Results:
Sum: 32
Difference: 8
Product: 240
Quotient: 1.66667
1. Arithmetic Operations (Add, Subtract, Multiply, Divide)
2. Temperature Conversion (Fahrenheit <-> Celsius)
3. Currency Conversion (Dollar <-> Peso)
4. Exit
Enter your choice (1-4): 2
Temperature Conversion
1. Fahrenheit to Celsius
2. Celsius to Fahrenheit
Enter your choice: 1
Enter temperature in Fahrenheit: 20
Temperature in Celsius: -6.66667C
1. Arithmetic Operations (Add, Subtract, Multiply, Divide)
2. Temperature Conversion (Fahrenheit <-> Celsius)
3. Currency Conversion (Dollar <-> Peso)
4. Exit
Enter your choice (1-4): 2
Temperature Conversion
1. Fahrenheit to Celsius
2. Celsius to Fahrenheit
Enter your choice: 2
Enter temperature in Celsius: 20
Temperature in Fahrenheit: 68F

```
1. Arithmetic Operations (Add, Subtract, Multiply, Divide)
2. Temperature Conversion (Fahrenheit <-> Celsius)
3. Currency Conversion (Dollar <-> Peso)
4. Exit
Enter your choice (1-4): 3

Currency Conversion
1. Dollar to Peso
2. Peso to Dollar
Enter your choice: 1
Enter amount in Dollars: $100
Equivalent in Pesos: ?5850

1. Arithmetic Operations (Add, Subtract, Multiply, Divide)
2. Temperature Conversion (Fahrenheit <-> Celsius)
3. Currency Conversion (Dollar <-> Peso)
4. Exit
Enter your choice (1-4): 3

Currency Conversion
1. Dollar to Peso
2. Peso to Dollar
Enter your choice: 2
Enter amount in Pesos: ?5000
Equivalent in Dollars: $85.4701

1. Arithmetic Operations (Add, Subtract, Multiply, Divide)
2. Temperature Conversion (Fahrenheit <-> Celsius)
3. Currency Conversion (Dollar <-> Peso)
4. Exit
Enter your choice (1-4): 4
Exiting Program
Invalid choice


--------------------------------
Process exited after 27.92 seconds with return value 0
Press any key to continue . . .
```

7. Supplementary Activity

This whole program consists of 3 functions with different uses, cases, and functions. I made 4 switch cases for each function and the 4th case is to exit or end the program. The first function is the Arithmetic Operations which can do the following: add, subtract, multiply, and divide integers/numbers depending on the user input. I programmed it to display “cannot divide by zero” because anything that is divided by zero will always be zero. The next function is the temperature conversion. This function lets the user choose what to convert, either Fahrenheit to Celsius or vice versa, and also adds an “Invalid number” display if the value is not the right one or it cannot be read by the program. This conversion works because I added the formula of it, same goes with the arithmetic operations and its basic operations. The last function is Currency or Money conversion, it lets the user convert dollars to peso or peso to dollars, depending on the choice using a constant rate of 58.5 peso per 1 dollar.

8. Conclusion

I learned in this activity how to use functions more from an in depth point of view, it helped me make this activity more organized and let me make a program that has 3 different functions assigned to different tasks in a program. This activity also made me use almost everything that I have learned recently like using void statements and proper usage of switch cases. My key takeaway from this activity is I didn’t make use of any loops/ for loops, I think it would be easier and more creative if I made some of the functions have loops to make it run more smoothly.