CompoundInterest.java

```java
/*
Bhuvana Kanakam, SE21UCSE035
Calculate Compound Interest
concept : Principle*(1+(rate / 100))^time - Principle
*/

import java.util.Scanner;
public class CompoundInterest {
        public static void main (String args[]){
                double compound_interest;
                Scanner value = new Scanner(System.in);
                System.out.print("Enter a Principle number : ");
                double principle = value.nextDouble();
                System.out.print("Enter a Interest Rate (%): ");
                double rate = value.nextDouble();
                System.out.print("Enter a time in years.   : ");
                int time = value.nextInt();

                compound_interest = principle * (Math.pow((1 + rate / 100), time)) - principle;
                System.out.println("The Compound Interest is : " + compound_interest);
        }
}
```

bhuvana@Poseidon:~/documents/semester 5/CS3105-ObjectOrientedProgra... ⌥⌘3

```
Last login: Thu Sep  7 11:08:05 on ttys001
~ ✔ at 11:09:21 AM
cd documents

~/documents ✔ at 11:09:33 AM
cd "semester 5"

~/documents/semester 5 ✔ at 11:09:36 AM
cd CS3105-ObjectOrientedProgramming

~/documents/s/CS3105-ObjectOrientedProgramming
cd Lab

~/documents/s/CS3105/Lab ✔ at 11:09:41 AM
javac CompoundInterest.java

~/documents/s/CS3105/Lab ✔ at 11:09:45 AM
java CompoundInterest
Enter a Principle number : 5000
Enter a Interest Rate (%): 12
Enter a time in years.   : 1
The Compound Interest is : 600.0000000000009

~/documents/s/CS3105/Lab ✔ took 45s ⌛ at 11:10:33 AM
```

AreaPerimeter.java

```java
/*
Bhuvana Kanakam, SE21UCSE035
Calculate Area and Perimeter of rectangle
*/

import java.util.Scanner;
public class AreaPerimeter {
    public static void main(String[] args) {
        int length, bredth, perimeter, area;
        Scanner measurement = new Scanner(System.in);
        System.out.print("Enter length of rectangle : ");
        length = measurement.nextInt();
        System.out.print("Enter breadth of rectangle: ");
        bredth = measurement.nextInt();
        perimeter = 2 * (length + bredth);
        System.out.println("Perimeter of rectangle: "+perimeter);
        area = length * bredth;
        System.out.println("Area of rectangle: "+area);
    }
}
```

bhuvana@Poseidon:~/documents/semester 5/CS3105-ObjectOrientedProgra... ⌥⌘1

```
Last login: Thu Sep  7 10:24:35 on ttys000
 ~                                                                    at 11:08:05 AM
 cd documents

 ~/documents                                                          at 11:08:11 AM
 cd "semester 5"

 ~/documents/semester 5                                               at 11:08:16 AM
 cd CS3105-ObjectOrientedProgramming

 ~/documents/s/CS3105-ObjectOrientedProgramming
 cd Lab

 ~/documents/s/CS3105/Lab                                             at 11:08:21 AM
 javac AreaPerimeter.java

 ~/documents/s/CS3105/Lab                                             at 11:08:41 AM
 java AreaPerimeter
Enter length of rectangle : 20
Enter breadth of rectangle: 50
Perimeter of rectangle: 140
Area of rectangle: 1000

 ~/documents/s/CS3105/Lab                                 took 13s    at 11:08:58 AM
```

TempConvert.java

```java
/*
Bhuvana Kanakam, SE21UCSE035
Convert Temperature in java.
concept is that T(f) = (T(c) * (9/5)) + 32
*/

import java.util.Scanner;
public class TempConvert{
        public static void main (String[] args){
                Scanner temperature = new Scanner (System.in);
                System.out.print("Enter temp in Celsius :");
                float Celsius = temperature.nextFloat();
                float Fahrenheit =((Celsius*9)/5)+ 32;
                System.out.println ("Temperature in Fahrenheit is: "+Fahrenheit);
        }
}
```

bhuvana@Poseidon:~/documents/semester 5/CS3105-ObjectOrientedProgra... ⌥⌘2

```
Last login: Thu Sep  7 10:23:47 on ttys001
 ~                                                                    at 10:24:35 AM
 cd documents

 ~/documents                                                          at 11:07:23 AM
 cd "semester 5"

 ~/documents/semester 5                                               at 11:07:27 AM
 cd CS3105-ObjectOrientedProgramming

 ~/documents/s/CS3105-ObjectOrientedProgramming
 cd Lab

 ~/documents/s/CS3105/Lab                                             at 11:07:34 AM
 javac TempConvert.java

 ~/documents/s/CS3105/Lab                                             at 11:07:41 AM
 java TempConvert
Enter temp in Celsius :15
Temperature in Fahrenheit is: 59.0

 ~/documents/s/CS3105/Lab                                 took 4s     at 11:07:50 AM
```

BitWiseOperator.java

```java
/*
Bhuvana Kanakam, SE21UCSE035
Bitwise Operations
*/

import java.util.Scanner;
public class BitWiseOperator {
        public static void main (String[] args){
                Scanner number = new Scanner (System.in);
                System.out.println("Enter Number 1: ");
                int num1 = number.nextInt();
                System.out.println("Enter Number 2: ");
                int num2 = number.nextInt();

                System.out.println("BitWise AND & for Number 1 and 2 : " +(num1 & num2));
                System.out.println("BitWise OR | for Number 1 and 2  : " +(num1 | num2));
                System.out.println("BitWise XOR ^ for Number 1 and 2 : " +(num1 ^ num2));
                System.out.println("BitWise NOT ~ for Number 1 : " + ~num1);
                System.out.println("BitWise NOT ~ for Number 2 : " + ~num2);

        }
}
```

bhuvana@Poseidon:~/documents/semester 5/CS3105-ObjectOrientedProgrammi... ⌥⌘1

```
Last login: Thu Sep  7 10:23:10 on ttys000
 ~                                                              ✔ at 10:23:47 AM
 cd documents

 ~/documents                                                    ✔ at 10:24:07 AM
 cd "semester 5"

 ~/documents/semester 5                                         ✔ at 10:24:08 AM
 cd CS3105-ObjectOrientedProgramming

 ~/documents/s/CS3105-ObjectOrientedProgramming
 cd Lab

 ~/documents/s/CS3105/Lab                                       ✔ at 10:24:12 AM
 javac BitWiseOperator.java

 ~/documents/s/CS3105/Lab                                       ✔ at 10:24:16 AM
 java BitWiseOperator
Enter Number 1:
2
Enter Number 2:
3
BitWise AND & for Number 1 and 2 : 2
BitWise OR | for Number 1 and 2  : 3
BitWise XOR ^ for Number 1 and 2 : 1
BitWise NOT ~ for Number 1 : -3
BitWise NOT ~ for Number 2 : -4
```

PrimeNumber.java

```java
/*
Bhuvana Kanakam, SE21UCSE035
Check for Prime Number : it is a number greater than 1 and it is divided by 1 and itself only
*/

import java.util.Scanner;
public class PrimeNumber {
        static boolean isPrime (int n) {
                if (n <= 1)
                        return false;
                for (int i = 2; i <= Math.sqrt(n); i++)
                        if (n % i == 0){
                                return false;
                        }
                return true;
        }

        public static void main(String args[])
        {
                Scanner number = new Scanner (System.in);
                System.out.print("Enter Number: ");
                int num = number.nextInt();
                System.out.println("Number " + num + " prime condition is : " + isPrime(num));
        }
}
```

bhuvana@Poseidon:~/documents/semester 5/CS3105-ObjectOrientedProgramming/... ⌥⌘2

```
Last login: Thu Sep  7 10:21:32 on ttys001
 ~                                                                  ✔ at 10:23:10 AM
 cd documents

 ~/documents                                                        ✔ at 10:23:18 AM
 cd "semester 5"

 ~/documents/semester 5                                             ✔ at 10:23:20 AM
 cd CS3105-ObjectOrientedProgramming

 ~/documents/s/CS3105-ObjectOrientedProgramming                     ✔ at 10:23:21 AM
 cd Lab

 ~/documents/s/CS3105/Lab                                           ✔ at 10:23:24 AM
 javac PrimeNumber.java

 ~/documents/s/CS3105/Lab                                           ✔ at 10:23:28 AM
 java PrimeNumber
Enter Number: 27
Number 27 prime condition is : false

 ~/documents/s/CS3105/Lab                                           ✔ at 10:23:33 AM
 java PrimeNumber
Enter Number: 2
Number 2 prime condition is : true
```

LeapYear.java

```java
/*
Bhuvana Kanakam, SE21UCSE035
Check for Leap Year
*/


import java.util.Scanner;
public class LeapYear {
        public static void main (String[] args){
                Scanner yearobj = new Scanner (System.in);
                System.out.println("Enter a year: ");
                int year = yearobj.nextInt();
                boolean isLeapYear;

                isLeapYear = (year % 4 == 0);
                isLeapYear = isLeapYear && (year % 100 != 0 || year % 4 == 0);
                if (isLeapYear) {
                        System.out.println (year + " is a leap year");
                }
                else{
                        System.out.println (year + " is not a leap year");
                }
        }
}
```

bhuvana@Poseidon:~/documents/semester 5/CS3105-ObjectOrientedProgramming/... ⌥⌘1

```
Last login: Thu Sep  7 10:17:34 on ttys000
 ~                                                                  ✔ at 10:21:32 AM
 cd documents
 ~/documents                                                        ✔ at 10:22:22 AM
 cd "semester 5"
 ~/documents/semester 5                                             ✔ at 10:22:26 AM
 cd CS3105-ObjectOrientedProgramming
 ~/documents/s/CS3105-ObjectOrientedProgramming                     ✔ at 10:22:28 AM
 cd Lab
 ~/documents/s/CS3105/Lab                                           ✔ at 10:22:30 AM
 javac LeapYear.java
 ~/documents/s/CS3105/Lab                                           ✔ at 10:22:35 AM
 java LeapYear
Enter a year:
1990
1990 is not a leap year
 ~/documents/s/CS3105/Lab                                           ✔ at 10:22:39 AM
 java LeapYear
Enter a year:
2023
2023 is not a leap year
 ~/documents/s/CS3105/Lab                                           ✔ at 10:22:44 AM
```

EvenOdd.java

```java
/*
Bhuvana Kanakam, SE21UCSE035
Check for Even or ODD
*/

import java.util.Scanner;
public class EvenOdd {
        public static void main (String[] args) {
                Scanner number = new Scanner (System.in);
                System.out.println("Enter a number: ");
                int num = number.nextInt();
                if (num % 2 == 0)
                        System.out.println("Number " + num + " is even");
                else
                        System.out.println("Number " + num + " is odd");
        }
}
```

bhuvana@Poseidon:~/documents/semester 5/CS3105-ObjectOrientedProgramming/... ⌥⌘1

```
Last login: Thu Sep  7 10:09:52 on ttys001
 ~                                                                  ✔ at 10:15:59 AM
 cd documents

 ~/documents                                                        ✔ at 10:16:10 AM
 cd "semester 5"

 ~/documents/semester 5                                             ✔ at 10:16:13 AM
 cd CS3105-ObjectOrientedProgramming

 ~/documents/s/CS3105-ObjectOrientedProgramming                     ✔ at 10:16:17 AM
 cd Lab

 ~/documents/s/CS3105/Lab                                           ✔ at 10:16:19 AM
 javac EvenOdd.java

 ~/documents/s/CS3105/Lab                                           ✔ at 10:16:27 AM
 java EvenOdd
Enter a number:
17
Number 17 is odd

 ~/documents/s/CS3105/Lab                                  ✔ took 4s at 10:16:35 AM
```

SwapTwoNumbers.java — Edited

```java
/*
Bhuvana Kanakam, SE21UCSE035
Problem 1 : swap two numbers without a temporary variable in java
*/

import java.util.Scanner;
class SwapTwoNumbers {
        public static void main (String[] args) {
                Scanner number = new Scanner(System.in);
                System.out.println("Enter Number 1");
                int x = number.nextInt();
                System.out.println("Enter Number 2");
                int y = number.nextInt();
                System.out.println ("Before Swapping " + "x is " + x + ", and y is " + y);
                x = x + y;
                y = x - y;
                x = x - y;
                System.out.println ("After Swapping " + "x will be " + x + ", and y will be " + y);
        }
}
```

bhuvana@Poseidon:~/documents/semester 5/CS3105-ObjectOrientedProgramming/... ⌥⌘1

```
~/documents ✔ at 10:11:01 AM
cd "semester 5"

~/documents/semester 5 ✔ at 10:11:05 AM
cd CS3105-ObjectOrientedProgramming

~/documents/s/CS3105-ObjectOrientedProgramming
cd Lab

~/documents/s/CS3105/Lab ✔ at 10:11:17 AM
javac SwapTwoNumbers.java

~/documents/s/CS3105/Lab ✔ at 10:12:31 AM
java SwapTwoNumbers
Enter Number 1
19
Enter Number 2
28
Before Swapping x is 19, and y is 28
After Swapping x will be 28, and y will be 19

~/documents/s/CS3105/Lab ✔ took 5s ⌛ at 10:12:44 AM
```