1.Linear Search

```
public class LinearSearch {
    public static void searchElement(Integer key) {
        System.debug(’Linear Search’);
        Integer s = -1;
        List<Integer> lon = new List<Integer>();
        lon.add(3);
        lon.add(4);
        lon.add(5);
        lon.add(6);

        System.debug(’List: ’ + lon);

        for (Integer i = 0; i < lon.size(); i++) {
            if (key == lon[i]) {
                s = 1;
                break; // Exit loop after finding
            }
        }

        if (s == 1) {
            System.debug(’Element Found’);
        } else {
            System.debug(’Element Not Found’);
        }
    }
}
```

2.Calculator

```
public class Calculate {
    public static void calculate(double num1, double num2, String operation) {
        if (operation == ’+’) {
            System.debug(num1 + num2);
            return;
        }
        if (operation == ’-’) {
            System.debug(num1 - num2);
            return;
        }
        if (operation == ’*’) {
            System.debug(num1 * num2);
            return;
        }
        if (operation == ’/’) {
            if (num2 == 0) throw new IllegalArgumentException(’Cannot divide by zero!’);
            double result = num1/num2;
            System.debug(result); // Truncates decimal
            return;
        }

        throw new IllegalArgumentException(’Invalid operation: ’ + operation);
    }
}
```

3.Student_marksheet

```
public class Marksheet {
    public static void generateMarkSheet(String name, Integer[] marks) {
        Integer total = 0;
        for (Integer mark : marks) {
            total += mark;
        }

        Double average = total / (Double)marks.size();

        String grade = average >= 90 ? ’A+’ :
                       average >= 75 ? ’A’ :
                       average >= 60 ? ’B’ :
                       average >= 40 ? ’C’ : ’F’;

        System.debug(’Student: ’ + name);
        System.debug(’Total: ’ + total);
        System.debug(’Average: ’ + average);
        System.debug(’Grade: ’ + grade);
    }
}
```

4.Greatest Number

```
public class GreatestNumber {
    public static Integer findGreatest(Integer a, Integer b, Integer c) {
        Integer greatest;

        if (a >= b && a >= c) {
            greatest = a;
        } else if (b >= a && b >= c) {
            greatest = b;
        } else {
            greatest = c;
        }

        return greatest;
    }
}
```

5.Electricity Bill

```
public class Electricity {
 public static Double calculateElectricityBill(Integer units) {
        Double rate;
        if (units <= 100) rate = 1.5;
        else if (units <= 300) rate = 2.5;
        else rate = 4.0;
        return units * rate;
    }
}
```

6.celsius to far

```
public class CelsToFar {
 public static Double celsiusToFahrenheit(Double celsius) {
        return (celsius * 9/5) + 32;
    }
}
```

7.currency convertor (INR,USD,EUR)

```
public class CurrencyConverter {
    public static Double currencyConvert(Double amount, String fromCurrency, String toCurrency) {
        // Example conversion rates
        Double inrToUsd = 83.0;
        Double inrToEur = 90.0;
        Double usdToEur = 1.08;

        if (fromCurrency == toCurrency) {
            return amount;
        }

        if (fromCurrency == ’INR’ && toCurrency == ’USD’) return amount / inrToUsd;
        else if (fromCurrency == ’USD’ && toCurrency == ’INR’) return amount * inrToUsd;
        else if (fromCurrency == ’INR’ && toCurrency == ’EUR’) return amount / inrToEur;
        else if (fromCurrency == ’EUR’ && toCurrency == ’INR’) return amount * inrToEur;
        else if (fromCurrency == ’USD’ && toCurrency == ’EUR’) return amount * usdToEur;
        else if (fromCurrency == ’EUR’ && toCurrency == ’USD’) return amount / usdToEur;

        // Unsupported conversion
        return null;
    }
}
```