1.
```java
package com.org.gen.test;

import java.util.Scanner;
import java.util.*;

public class UserMainCode {
        public static int calculateElectricityBill (String str1, String
str2, int input3) {
          int n1 = Integer.parseInt(str1.substring(5, str1.length()));
          int n2 = Integer.parseInt(str2.substring(5, str2.length()));
          int n = Math.abs((n2 - n1) * input3);
          return n;
        }
        public static void main(String[] args) {
          Scanner sc = new Scanner(System.in);
          String s1 = sc.nextLine();
          String s2 = sc.nextLine();
          int n = sc.nextInt();
          int n1 = calculateElectricityBill(s1, s2, n);
          System.out.println(n1);
        }
      }
```

Output:

```
ABC2012345
ABC2012660
4
1260
```

2.
```java
package com.org.gen.test;

import java.util.Scanner;

public class UserMainCode1 {
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        String s1 = s.next();
        boolean color = validateColorCode(s1);
        if (color == true)
            System.out.println("Valid");
        else
            System.out.println("Invalid");
    }

    public static boolean validateColorCode(String str) {
        boolean color = false, color1 = false;
        String s1 = str.substring(1, str.length());
        if (str.length() == 7)
            if (str.charAt(0) == '#')
            color1 = true;
        if (color1 == true)
            for (int i = 0; i < s1.length(); i++) {
            char c = s1.charAt(i);
            if (c != '#') {
                if (s1.matches("[A-Fa-f0-9]{6}|[A-Fa-f0-9]{3}"))
                    color = true;
                else {
```

```
                    color = false;
                    break;
                }
            }
        }
        return color;
    }
}
```

Output:

```
#FF9922
Valid
```

3.
```
package com.org.gen.test;

import java.util.Scanner;
public class UserMainCode3 {

        static int calculatenCr(int n, int r) {
            return fact(n) / (fact(r) *
                              fact(n - r));
        }
        static int fact(int n) {
            int res = 1;
            for (int i = 2; i <= n; i++)
                res = res * i;
            return res;
        }

        public static void main(String[] args) {
            Scanner sc = new Scanner(System.in);
            int n = sc.nextInt();
            int r = sc.nextInt();
            System.out.println(calculatenCr(n, r));
        }
}
```

Output:

```
4
3
4
```

4.
```
package com.org.gen.test;
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String a = sc.nextLine();
        if (UserMainCode4.validatePassword(a) == 1) {
            System.out.println("Valid");
        } else {
            System.out.println("Invalid");
        }
    }
}
```

```
package com.org.gen.test;

public class UserMainCode4 {
          static int validatePassword(String a) {
              int d = 0;
              if (a.length() >= 8) {
                  if (a.contains("#") || a.contains("@") ||
a.contains("_")) {
                      char c = a.charAt(0);
                      if (Character.isAlphabetic(c)) {
                          char dd = a.charAt(a.length() - 1);
                          if ((Character.isAlphabetic(dd)) ||
(Character.isDigit(dd))) {

                              return 1;

                          }

                      }

                  }

              }

              return -1;
          }

      }
```

Output:

Ashok_23

Valid