

Practical No 2:

Aim: Write a program to convert the given Right Linear Grammar to Left Linear Grammar form.

```
public class RightToLeft {

    char tmp;
    int i;
    String prod[][] = {{ "S", " ", "B"},
        {"B", "b", "D"},
        {"D", "b", "B"},
        {"S", "a", "B"},
        {"B", "a", " "}};

    RightToLeft() {
    }

    void PrintNonTerminal() {
        System.out.println("\n");
        System.out.println("\tNon Terminals are;" + "S,B,D");
        System.out.println("\n");
    }

    void PrintTerminal() {
        System.out.println("\tTerminals are;a,b");
        System.out.println("\n");
    }

    void PrintProductions() {
        int i;
        System.out.println("\n");
        System.out.println("\tConversion of Right to Left Linear Grammer: ");
        System.out.println("\n");
        System.out.println("\tProductions are");
        System.out.println("\t=====");
        for (i = 0; i < 5; i++)
        {
            if (prod[i][1] == " ")
            {
                System.out.println("\t" + prod[i][0] + " -->" + "I" + prod[i][2]);
            } else if (prod[i][2] == " ")
            {
                prod[i][2] = "Z";
                System.out.println("\t" + prod[i][0] + " --> " + prod[i][1] + "Z");
            } else
            {
                System.out.println("\t" + prod[i][0] + " --> " + prod[i][1] + prod[i][2]);
            }
        }
    }
}
```

```

void PrintLeft2RightLinear() {
    int i;
    System.out.println("\t" + "Left Linear Grammer:");
    System.out.println("\t" + "=====");
    for (i = 0; i < 5; i++)
    {
        String tmp = prod[i][1];
        prod[i][1] = prod[i][2];
        prod[i][2] = tmp;
        System.out.println("\t" + prod[i][0] + " --> " + prod[i][1] + prod[i][2]);
    }
}

public static void main(String[] args) {
    RightToLeft r = new RightToLeft();
    r.PrintProductions();
    r.PrintNonTerminal();
    r.PrintTerminal();
    r.PrintLeft2RightLinear();
}
}

```